1929 A. O. A. CONVENTION, DES MOINES, JUNE 17-22

THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION

Published monthly by the American Osteopathic Association. Office of Publication, 1112 North Blvd., Oak Park, Ill. Editorial Offices at 844 Rush St., Chicago, Ill. Subscription, $5 a year. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 31, 1922. Entered at the Oak Park, Illinois, post office as second class matter, April 1, 1926, under the Act of March 3, 1879.

Vol. XXVIII FEBRUARY, 1929 No. 6

Normal Spine Week, March 17-23

SPECIAL ARTICLES

A SYMPOSIUM ON THE SCIENCE AND ART OF OSTEOPATHY: (Six special articles.) Structure—The Basic Determinant of Body Function. Wilborn J. Deason, D.O. 429

The Osteopathic Concept of Etiology. Carl P. McConnell, D.O., Los Angeles 431

Structure and Immunity. R. N. MacBain, D.O., Chicago....433

The Scientific Philosophy of Osteopathy. Orren E. Smith, D.O., Indianapolis 435

Bony Lesion Adjustment vs. Soft Tissue Work as a Means of Normalizing Body Function. Frank Hunter Smith, D.O., Indianapolis 438

A Formula Governing the Application of Force in Tissue Adjustment. John A. MacDonald, D.O., Boston 438

The New Non-Surgical Treatment of Phlebectasis Varix and Sequelæ. Walter H. Gillmore, D.O., Minneapolis 444

EDITORIALS

Specificity. Carl P. McConnell, D.O., Los Angeles 447

Basic Principles of Osteopathy. Paul Van B. Allen, D.O., Indianapolis..448

Are You Keeping Up With Them? C. J. Gaddis, D.O., Chicago....449

Varicose Veins. H. L. Collins, D.O., Chicago 449

Knowledge Means Caution. C. J. Gaddis, D.O. 450

New—A Definite Aid in Prescribing Diets

This work is absolutely different from any other book on diet. It was written entirely and always from the viewpoint of the general physician. It makes the writing of a dietary prescription easy and effective.

First it considers Diet in Health and Nutritional Requirements. This includes sections on diet for school children. There is also an important chapter on diet and reproduction with menus during pregnancy and lactation. The chapter on the feeding of infants has been contributed by Dr. McKim Marriott and includes the latest lactic-acid milk feeding. There is a section of 85 pages on metabolism, giving the Harris and Benedict basal metabolic tables, Locke's food value and alcoholic beverages tables, and Fischer's standard portions tables.

The complete work of Murphy and Minot on liver feeding in pernicious anemia is given, with detailed menus and exact methods of preparing the liver. There is a 50-page section on diabetes in adults and children, which includes the latest treatment with diet alone and with insulin and diet. There are hundreds of diet lists, and a chapter by Dr. Barney Brooks on feeding the surgical patient.

Nutrition and Diet in Health and Disease. By JAMES S. MCLESTER, M.D., Professor of Medicine at the University of Alabama. Octavo of 783 pages. Cloth, $8.00 net.

W. B. SAUNDERS COMPANY Philadelphia and London

The Menopause

WHEN hormone production ceases at the change of life, the delicate hormone balance, the maintenance of which has depended upon ovarian activity for approximately thirty years, sometimes becomes sadly deranged, causing considerable disturbance in the work of the other ductless glands.

The chief symptoms of this condition are of a circulatory character. Flushes of heat, fleeting and indefinite pains, pelvic fullness due to congestion, sympathetic irritability or melancholia and depression, make up a symptom-complex which, although often called neurasthenia, is nothing but dyscrinism—a disturbed balance of the ovaries, the thyroid, and the pituitary.

A combination of the glands in question, such as is found in Thyro-Ovarian Co. (Harrower), taken for a month or two, will relieve the various menopausal irregularities in most cases. This preparation is just as effective in other conditions of ovarian insufficiency or imbalance, such as amenorrhea or dysmenorrhea. Uniformly good results obtain because the contents of this formula are of the very highest quality, the ovarian substance having a particularly high lipochrome and folliculin content. Prescribe it.

Thyro-Ovarian Co.

(Harrower)

SPECIFY "HARROWER"

The Harrower Laboratory, Inc.
Glendale, California

IN ACIDOSIS

All the bases of the body are drawn upon (not only sodium) and lost from the body. When only sodium bicarbonate is given the loss of the other bases is not made up. The use of KALAK WATER makes possible the administration of the several bases in agreeable form — an important matter when patients must take alkalies for longer periods.

Each bottle carries in sparkling form several grammes of the bicarbonates of sodium, potassium, calcium and magnesium.

Kalak Water Company
of New York
6 Church Street
New York City

Reprint of advertisement of Eveready Sunshine Lamp

SUNSHINE and the Doctor

THE National Carbon Company has designed the Eveready Sunshine Lamp and Eveready Sunshine Carbons to produce a light equivalent to sunshine that can be used in the home at any time or season.

Ultra-violet, visible and infra-red rays are produced in practically the same proportions as are found in outdoor sunshine. With the Eveready Sunshine Lamp supplied with Eveready Sunshine Carbons, physicians are now able to prescribe a safe, controlled sunlight for the prevention and cure of rickets and other cases where sunshine is needed.

In advertising and selling these lamps and carbons to the general public we are careful to direct the reader to his physician in case of illness, under no conditions to risk the dangers of self-diagnosis, and to use light only to build up health.

Regarding this careful ethical policy, the Council on Physical Therapy of the American Medical Association made the following statement: "Your letter of July 2, 1928, outlining the proposed policy of National Carbon Company, Inc., was submitted to the Council for consideration. The policy therein outlined is acceptable to the Council."

We will be glad to send you our booklets giving full details of Eveready Sunshine Lamps, and Eveready Sunshine Carbons, as well as those describing Eveready National Therapeutic Carbons which are sold only by physicians' supply houses on your prescription.

NATIONAL CARBON COMPANY, INC.
***Carbon Sales Division,* Cleveland, Ohio**
Unit of Union Carbide* UCC *and Carbon Corporation

For Practical Osteopaths
Whenever there is contracted musculature, pain or congestion, the local hyperaemia and sedative salicylates of Betul-ol are indicated.
Write for a sample and a copy of our new book, entitled "Counter-Irritation as expressed by Betul-ol."
The Huxley Laboratories, Inc.
175 Varick Street, New York
BETUL-OL

CONTENTS—FEBRUARY, 1929

ORIGINAL ARTICLES—
Studies in Osteopathic Pathology, V, C. P. McConnell 425

A SYMPOSIUM ON THE SCIENCE AND ART OF OSTEOPATHY:
Structure—The Basic Determinant of Body Function, Wilborn J. Deason 429
The Osteopathic Concept of Etiology, C. P. McConnell 431
Structure and Immunity, R. N. MacBain 433
The Scientific Philosophy of Osteopathy, Orren E. Smith 435
Bony Lesion Adjustment vs. Soft Tissue Work as a Means of Normalizing Body Function, Frank H. Smith 438
A Formula Governing the Application of Force in Tissue Adjustment, John A. MacDonald 438
Diabetes — Its Diagnosis and Treatment, Stanley G Bandeen 441
The New Non-Surgical Treatment of Phlebectasis Varix and Sequelæ, Walter Harry Gillmore 444

EDITORIALS—
Specificity, C. P. McConnell 447
Basic Principles of Osteopathy, Paul Van B. Allen 448
Are You Keeping Up With Them? 449
Varicose Veins, Harry L. Collins 449
Knowledge Means Caution 450

CONVENTION NOTES 451

DEPARTMENT OF PROFESSIONAL AFFAIRS—
Hospitals and Sanitariums 452
Professional Development 453

DEPARTMENT OF PUBLIC AFFAIRS—
Bureau of Clinics:
Normal Spine Week 453
Industrial and Institutional Service 454
National Affairs 455
Osteopathic Exhibits 455
State Legal and Legislative 456
Information and Statistics 457

THE ART OF PRACTICE—
The Little Niceties That Patients Appreciate 457

A. O. A. OFFICERS FOR 1928-1929 457

CURRENT MEDICAL LITERATURE 459

AMERICAN OSTEOPATHIC SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY—
Deafness, J. D. Edwards 460

AMERICAN COLLEGE OF OSTEOPATHIC SURGEONS—
Focal Infection, Harry L. Collins 463

BOOK NOTICES 464

COLLEGES 465

BUSINESS EFFICIENCY 471

STATE AND DIVISIONAL NEWS 473

MISCELLANEOUS—
Changes of Address 481, 484, 485
Professional Cards 484, 485, 486
Applicants for Membership 486
Classified Advertisements 487

Oranges, Lemons *and* —ACIDOSIS

An authority's reasons why these fruits are prescribed in the treatment of this almost universal ailment.

(Quotations from articles by W. D. Sansum, M.D., Cottage Hospital, Santa Barbara, California.)

Note: **WE, the Sunkist Orange and Lemon Growers of California, are printing a series of announcements, over the period of one year, to the public in large space in the SATURDAY EVENING POST, LITERARY DIGEST, COLLIER'S WEEKLY, LIBERTY MAGAZINE, GOOD HOUSEKEEPING, WOMAN'S HOME COMPANION, McCALL'S, PICTORIAL REVIEW, DELINEATOR, and LADIES HOME JOURNAL dealing with the subject of Acidosis and urging all who have the symptoms in any considerable degree to "consult their doctors with regard to treatment." We suggest that you look for and read these articles for we believe you'll find them interesting.**

ACIDOSIS, as all doctors know, is one of the common ailments of the day, and diet is the main control.

But scores of thousands among laymen have wrong ideas about the foods that should enter into diets of this kind.

They know Oranges and Lemons, for instance, as "acid fruits," and thus have been led to believe that these fruits should be omitted from a diet designed to correct or prevent "acid condition" of the body.

We quote from the authority named above who has treated many cases with signal success:

"These fruits are distinctly acid in taste and are usually avoided by patients suffering from an Acidosis because of their acidity. However, the acids of these fruits, which are chiefly the citric and malic acids, combined in the form of salts with such alkaline substances as sodium and potassium, are promptly oxidized by the body to the respirable carbonic acid which is exhaled, leaving an alkaline ash.

"In 1921, Blatherwick and Long found it impossible to give sufficient orange juice to overstep the power of the body to utilize these organic acids. Two healthy individuals, one a nurse and the other a member of our chemical staff, volunteered for the experiment. The chemical reaction of the blood and the urine was first carefully determined on a standard diet. Six large oranges were given them on the first day of the experiment, and six large oranges were added on each successive day until the experimenters were each taking twenty-four large oranges daily. At the beginning, the urine was acid, and at the end it was distinctly alkaline. The alkalinity of the blood steadily increased from day to day.

"The orange growers are correctly using such scientific data when they assert in their advertisements that 'although known as acid fruit, oranges have an alkaline reaction in the body which offsets the acidity caused by such foods as meat, fish and eggs.' They should add cereals and breads to their statement. In preventing or curing an Acidosis, Oranges or Lemons together with apples, muskmelons, bananas and potatoes, are very efficient. Too much cannot be said about the value of fruits in a diet, for in addition to their alkalinizing effect, they have a high food value and contain an abundance of the minerals and vitamins."

To physicians who may wish to inform themselves further on the treatment of this almost universal malady as prescribed by a contemporary who has made a specialty of nutritional disorders, we are offering a new, revised, 136-page edition of "Normal Diet" by W. D. Sansum, M.D.

It explains Acidosis, its different types, its causes and results, and suggests the treatments indicated. Also includes a special color chart by which the body's relative acidity may be determined easily and quickly.

Dr. Sansum's high opinion of Oranges and Lemons as an Acidosis corrective, and our own interest in reading his book, led us to purchase a quantity at a large-lot price. We offer one or more copies to you at the special price of $1.00 each. We believe you will be interested in this book and will want it. If you do, please fill in the coupon at the bottom of this page, pin it to your check or money order for $1.00.

DIETETIC RESEARCH DEPARTMENT
CALIFORNIA FRUIT GROWERS EXCHANGE,
Div. 202-M, Box 530, Station "C," Los Angeles, California.

Please send me prepaid the new, revised, 136-page copy of "Normal Diet," by W. D. Sansum, M.D., explaining Acidosis, giving corrective and reducing diets, and including color chart for determining the body's relative acidity.

Enclosed find $1.00. (Kindly indicate.) ☐ Check ☐ Money Order.

NAME DR.....

STREET.....

CITY.....STATE.....

"Getting Enough to Eat—

and then getting rid of it, are two of the great problems of life," says E. W. Howe, sage of Kansas.

THE relief of intestinal stasis ceases to be a problem to the physician who uses Agarol, the original mineral oil emulsion with phenolpthalein, because Agarol may be safely used under any condition in medical practice.

Agarol contains no sugar—safe in diabetes; no alkali—does not interfere with digestion; no excess of oil—to cause leakage. Just the right proportion of ingredients to afford these desirable actions:

Softening of the intestinal contents.
Gentle stimulation of the peristaltic function.

Liberal trial quantities at the disposal of physicians upon request.

WILLIAM R. WARNER & CO., INC.

Manufacturing Pharmaceutists since 1856

113-123 West 18th Street
New York City

Colonic Stasis and its relation to Dermatology

FOR years the close relationship between certain dermatological affections, such as furunculosis and acne, and the condition of the patient's gastro-intestinal tract has been well known.

An interesting summing up of this relationship has recently come from a well known French physician and medical author of distinction. He says: "In dermatology, it is useless to recall the efficiency of yeast, already established by long experience, against various staphylococcic infections of the skin such as furunculosis . . . Yeast modifies the intestinal action, while not being destroyed itself by the various digestive fermentations. It attenuates intestinal fermentation . . . and regulates intestinal functioning."

Almost simultaneously, a distinguished London dermatologist is quoted as saying that in his field he has relied on yeast for many years, adding: "Its simplicity, its ability to increase peristalsis, its anti-putrefactive properties make it therapeutically of great value. In my opinion it should be used to an even greater extent than it is at present."

These are interesting side-lights on what one of the most distinguished of German doctors has described as the "many-sidedness of yeast" as a therapeutic agent.

American physicians and dermatologists have long recognized many of these uses of fresh yeast. Its tendency to soften the fecal masses and increase bulk and moisture, while gently stimulating the bowel wall to normal peristaltic action, are today very generally recognized as of distinct advantage in skin therapy.

Fresh yeast, unlike dried or killed yeast, remains viable even in the colon, enabling it to perform its purifying function daily. Physicians usually prescribe three cakes of Fleischmann's Yeast a day, one before each meal or between meals, plain or in water, cold or hot (not scalding), or in any way best suited to the patient's taste. It should of course be eaten regularly and over a sufficient period of time.

Upon your request a brochure on yeast therapy, containing a bibliography of articles and references, will gladly be mailed. Address The Fleischmann Company, Dept. 393, 701 Washington Street, New York.

Copyright, 1929, The Fleischmann Company

Mellin's Food—A Milk Modifier

Constipation in Infancy

THE fact that Mellin's Food makes the curd of milk soft and flaky when used as the modifier is a matter to always have in mind when it becomes necessary to relieve constipation in the bottle-fed baby; for tough, tenacious masses of casein resulting from the coagulation of ingested milk, not properly modified, is a frequent cause of constipation in infancy.

THE fact that Mellin's Food is free from starch and relatively low in dextrins, are other matters for early consideration in attempting to overcome constipation caused from the use of modifiers containing starch or carbohydrate compounds having a high dextrins content.

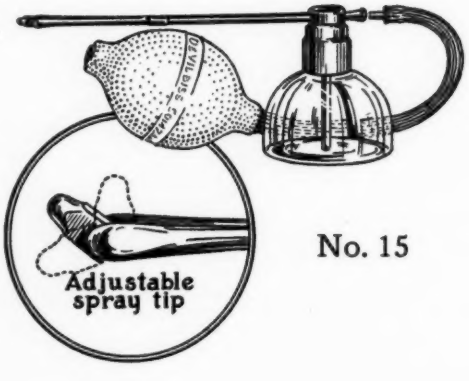
THE fact that Mellin's Food modifications have a practically unlimited range of adjustment is also worthy of attention when constipation is caused by fat intolerance, or an excess of all food elements, or a daily intake of food far below normal requirements, for all such errors of diet are easily corrected by following the system of infant feeding that employs Mellin's Food as the milk modifier.

Infants fed on milk properly modified with Mellin's Food are not troubled with constipation

A pamphlet entitled "Constipation in Infancy" and a liberal supply of samples of Mellin's Food will be sent to physicians upon request.

Mellin's Food Company, 177 State Street, Boston, Mass.

AN ADJUSTABLE SPRAY TIP!



No. 15

This spray is ideally suited for patient's use. The adjustable tip facilitates the efficient application of the prescribed solution.

Simply and efficiently constructed—may be used for both nose and throat.

Your patients will be glad to know of the convenient features of this spray.

THE DeVILBISS COMPANY
Toledo, Ohio

Lynco

Muscle-Building Arch Cushions

Meet with Osteopathic Requirements for Comfort and Efficiency

Often after making adjustments on patients' feet, osteopaths find that the weakened arches need a gentle support to hold the small bones in place.

LYNCO Arch Cushions, made of sponge-like cellular rubber, leather covered, give this support without interfering with muscle action or circulation. Hundreds of osteopaths are using the comfortable, commonsense LYNCO treatment in conjunction with their own method of correcting fallen arches.

These light weight, non-metallic cushions will be furnished with or without the maker's name.

Write for our special offer to osteopaths . . . it will interest you.

KLEISTONE RUBBER CO., Inc.

258 Cutler Street Warren, R. I., U. S. A.

Let Us Send YOU This Book, Doctor

We believe that if you will read and consider its contents in the light of your professional knowledge and experience, you will instantly recognize the scientific merit of the Philo Burt Method for relieving and correcting spinal curvature, with its sequelæ, and that you will avail yourself of the first opportunity to conclusively demonstrate its value.

It has been our privilege to co-operate with thousands of practitioners and we will gladly refer you to some of your own contemporaries. Or, we will accept the case from you and assume full responsibility — just as you prefer.

30 Days Trial

We will make a Philo Burt spinal appliance to measure to your own order for any patient and refund its entire cost if at the end of thirty days you find it does not meet the requirements or if you or your patients are dissatisfied.

More Than 57,000 Cases Successfully Treated

Send a postal today for this interesting free book and a portfolio of "Letters in Evidence" from physicians who tell their experience with this wonderful appliance.

PHILO BURT COMPANY, 181-2 Odd Fellows Bldg., Jamestown, N. Y.

FOR YOUR REFERENCE

THE CALENDAR

SPRING SEMESTER, JANUARY 28, 1929, to MAY 31, 1929

Jan. 28, Monday. Registration in college.

Jan. 29, Tuesday. Classes begin at 8 A. M.

Feb. 11, Monday. Registration ceases for all students.

Feb. 25, Monday. Last day for making changes in program for semester.

March 29, Friday, to April 1, Monday, inclusive. Easter vacation.

May 27, Monday, to May 30, Thursday, final examinations for semester.

May 31, Friday. Commencement exercises.

June 3-15, inclusive. Post-Graduate course.

June 17-23. A. O. A. Convention, Des Moines.

We invite correspondence

Kirksville College of Osteopathy and Surgery

GEORGE M. LAUGHLIN, D.O., President

H. G. SWANSON, A.M., Dean

KIRKSVILLE, MISSOURI

Mother and child will bless you

If, instead of ordering that nasty dose of castor oil, you write the magic word, "Lacricin," you will earn the gratitude of your patients particularly the little ones.

That means "milk of castor oil"—the therapeutic effect you desire, but no bad taste, no tears, no bribes of candy or nickels, no camouflage of orange juice or syrup.

Lacricin tastes so good that the average person cannot tell what it is. He will smack his lips and guess, "whipped cream," when you give him a taste of Lacricin.

With the fussy youngster, you can shake up a little Lacricin in water or milk, and he won't know he is taking medicine at all.

Maybe you don't believe that at last the bad taste, the oiliness and the odor have vanished from castor oil—but the proof of the thing is in the tasting. Taste Lacricin. We will send you a bottle without charge.

THE WM. S. MERRELL COMPANY
CINCINNATI, U. S. A.

LACRICIN

Milk of Castor Oil

THE WM. S. MERRELL COMPANY,
Cincinnati, U. S. A. Dept. A. O.-2
Gentlemen: Please send me a bottle of Lacricin free of charge.
Dr. .....
Address .....
.....

A SAFE RECOURSE IN INFLUENZA AND PNEUMONIA

The emplastrum, Pneumo-Phthysine, quickly reduces the fever temperature to within the safety zone.

It relieves pain and congestion and, because it can be removed at will, the clinical effects are brought under safe control.

Pneumo-Phthysine presents the following formula:

FORMULA

Guaiacol 2.6. Formalin 2.6.
Creosote 13.02. Quinine 2.6
Methyl Salicylate 2.6.
Glycerine and Aluminum Silicate, qs 1000 parts.

Write for literature and specimen for clinical trial

Pneumo-Phthysine Chemical Mfg. Co.
220 W. Ontario Street
CHICAGO

Trademark Registered **STORM** Trademark Registered

Binder and Abdominal Supporter

(Patented)

For Men, Women and Children

For Ptosis, Hernia, Pregnancy, Obesity, Relaxed Sacro-Iliac Articulations, Floating Kidney, High and Low Operations, etc.

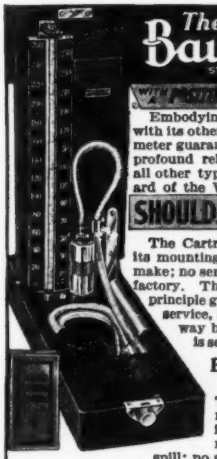
Ask for Literature

Mail orders filled at Philadelphia only—within 24 hours.

Katherine L. Storm, M. D.

Originator, Patentee, Owner and Maker

1701 DIAMOND ST. PHILADELPHIA



The New Lifetime

Baumanometer

STANDARD FOR BLOODPRESSURE

$2.00 a month

POSITIVE GUARANTEE LAST A LIFETIME

Embodying the new Cartridge Tube, along with its other exclusive features, the New Lifetime Baumanometer guarantees the physician a bloodpressure apparatus of profound reliability. Supersedes all other types. It is the Standard of the World.

SHOULD THE TUBE BREAK A NEW ONE IS SENT FREE

The Cartridge Tube slips into its mounting; no adjustments to make; no sending of apparatus to factory. The Cartridge Tube principle guarantees a lifetime of service, but should it in any way be broken, a new one is sent free.

The LIFETIME GUARANTEE

GUARANTEE

The Cartridge tube is guaranteed against breakage for owner's lifetime. Easy to change. No tools; no sending apparatus back. Interchangeability of tubes without impairing accuracy. A new one sent free if it breaks. Rubber parts not guaranteed.

EMPLOYS NATURE'S IMMUTABLE LAW OF GRAVITY INSURING ACCURACY

The unfailing reliability of gravitation method made use of. The scale of every instrument individually hand calibrated, another fundamental of scientific accuracy. Mercury cannot spill; no air-pockets. The variation of other instruments impossible.

Dr. Janeway, Johns Hopkins, Recommends It

Rockefeller Institute, Mayo Clinic, Yale and Harvard Medical Schools and many others use it. Metropolitan Life Insurance Co. bought 1000. Portable desk model (13¾x4½x2½ inches). **With Free Manual.**

10 DAYS TRIAL-EASY TERMS

Send just $2.00 and we will forward it to you at once. Try it. If not thoroughly satisfied return and get your money back. If perfectly satisfied, send the balance in ten monthly installments of $3.40 each; without interest—$36.00 in all complete, which is the regular cash price everywhere.

SIGN AND MAIL COUPON

A. S. ALOE CO., 1840 OLIVE ST., ST. LOUIS, MO.

I enclose first payment, $2.00. Send Baumanometer complete on 10 days trial. If I keep it, I will pay balance, $34.00, in 10 monthly payments of $3.40, without interest. I agree title remains in you until paid in full.

Name.....

Address.....

What About Your Hands?

THE osteopath's sensitive hands, with the tactile touch you are so proud of. Do your hands look the part?

NEPTO LOTION

serves you here—helps you keep your hands in professional shape.

It is a shore product, based on Carrageen—a smooth and gratifying lotion for the hands that must be often washed and dipped into antiseptics.

Nepto Lotion has a mild fragrance—no strong perfume—no oiliness.

But—let us put a little on your hands. That tells the story best, and this coupon brings a bottle to your office.

The E. L. Patch Company

Boston, Mass.

Makers of Patch's Flavored Cod Liver Oil

THE E. L. PATCH CO.,
Stoneham 80, Dept. AOA 2,
Boston, Mass.

Send me a trial bottle of Nepto Lotion.

Dr.....

Address.....

.....

The Improved Nestlé's Milk Food

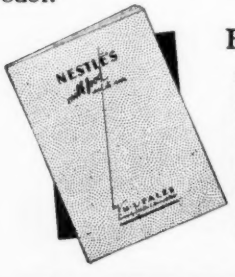
—an anti-rachitic polycarbohydrate milk modifier

THE Improved Nestlé's Milk Food, prepared with equal parts of fresh cow's milk and water, provides an ideal feeding for the normal infant— properly balanced in fat, protein, carbohydrate (an easily digested *mixture* of lactose, saccharose, maltose, dextrin and starch) and mineral salts.

Milk content has been made adequate for the infant's milk needs even when food is prepared with water only. Especially valuable, therefore, (1) when infants do not tolerate fresh cow's milk, (2) when milk supply is of doubtful purity, or (3) when advisable to give feeding relatively low in fat and protein and high in carbohydrate.

Prepared with water only, the Improved Nestlé's Milk Food is an excellent aid in correcting constipation. Small proportion of starch aids digestion and helps pave way for introduction of cereals into diet later. Mineral contents have been reinforced, especially in the needed calcium and phosphate. Highly recommended as a supplementary food for breast-fed infants because of its nourishing qualities and digestibility.

PROTECTS AGAINST RICKETS, because there has been added to it the vitamin-content of cod-liver oil without the disagreeable taste and odor.



FREE to Physicians

Free to Physicians—An interesting and helpful booklet has been prepared by Helen L. Fales, formerly research chemist and nutritional worker at the Babies' Hospital, New York City, on the composition, properties and uses of Nestlé's Milk Food. Mail coupon below for copy, also free sample of Food and celluloid feeding table calculator. Address Nestlé's Food Co., Inc., 2 Lafayette St., New York City.

NESTLÉ'S *milk food*

NESTLÉ'S FOOD CO., INC., Dept. 7-F-2
2 Lafayette St., New York City

_____Samples of the Improved Nestlé's Food
_____Celluloid feeding table calculator
_____Booklet by H. L. Fales
Please send supplies checked FREE to:

Name _____

Address _____

THE JOURNAL OF OSTEOPATHY is the profession's oldest periodical. For thirty-three years it has recorded the growth and progress of Osteopathy. It is particularly able to present the news of Kirksville, the "Hub" of Osteopathy. At the new rate, no osteopath can afford to be without

THE JOURNAL OF OSTEOPATHY

Price Reduced to $1.00 Per Year

KIRKSVILLE, MO.

Let

THE OSTEOPATHIC JOURNAL OF LABORATORY DIAGNOSIS

aid you with your problems in Diagnosis and Prognosis.

Our Review-Question and Answer Department is a Postgraduate Course for you.

Send $3.50 for a year's subscription.

2350 Cloverdale Ave.,

Los Angeles, Calif.

A New Test for Albumin

ALBUTESTA

Will coagulate the faintest trace of albumin

Dependable *Non-poisonous*
Does not stain the hands

Simple—Urine requires no boiling

Directions: Place small amount of urine in test tube, add two to five drops of

ALBUTESTA

Traces of albumin will cause a cloudy to milky appearance at once.

1 oz. Bottle sufficient for 150 tests with test tube and pipette.....$1.00

Send your orders to Dept. A.

MENLEY & JAMES, Ltd.
70 West 40th Street, New York, N. Y.

MAHOGANY, WALNUT OR QUARTERED OAK

OFFICE FURNITURE

Tables
Chairs
Cabinets
Stands
Stools

STYLE 1000 STAND G-123

"If you would have your office reflect good taste, refinement, permanency; see that it is equipped in wood."

CATALOG SENT ON REQUEST

SOLD BY ALL RELIABLE DEALERS

W. D. Allison Co., *Mfrs.*
912 N. Alabama St. INDIANAPOLIS

The Chemist and the Fisherman Get Together

IN Massachusetts the codfish is a state emblem, symbolic of the great fishing industry. It was logical, therefore, that the Patch laboratory, located in Massachusetts, should be a leader in research on American cod liver oil.

As a result of this research and the cooperation of fishermen who furnish the fresh cod livers, there was developed that pioneer American product—Patch's Flavored Cod Liver Oil.

To increase the resistance against disease and to build up energy after influenza and similar conditions, Patch's Flavored Cod Liver Oil, with its high Vitamin A content, is particularly valuable.

The guarantee of vitamin potency, both A and D, appears on every bottle. Another great feature—the taste—is a triumph over the oils of former days.

Have you tasted Patch's Flavored Cod Liver Oil yet? You should. You will be surprised at the pleasant taste—and the clinical results are all that can be desired.

This coupon brings you the whole story and a sample bottle of

PATCH'S
Flavored Cod Liver Oil

THE E. L. PATCH COMPANY
Boston :: Mass.

THE E. L. PATCH CO.,
Stoneham 80, Dept. A. O. A.-2
Boston, Mass.

Please send me a sample of Patch's Flavored Cod Liver Oil and literature.

Dr. .....

Address .....

Dufur Osteopathic Hospital

THIS hospital was organized seven years ago for the purpose of establishing a place in the EAST where patients might be sent for the *osteopathic*

Treatment of
Nervous and Mental Diseases

It soon outgrew its city quarters and now occupies its new, larger buildings, the main building of which is shown above. Its present capacity is 85 patients. A second building will be remodeled within a year, which will make the total capacity about 140.

The buildings are situated on 53 acres of ground, all in a high state of artistic development, with expansive lawns, terraces and gardens.

They give that quietude, freedom, fresh air, sunshine and restful atmosphere which are so necessary to the cure of these mental states.

Fresh vegetables, eggs, milk and butter are supplied; and the hospital has its own artesian wells. The buildings, grounds and equipment represent an

Investment of About $500,000.00

A corps of competent physicians, nurses and attendants is always at the service of patients.

Diagnostic and X-ray laboratories are complete.

All treatment is directed by Dr. J. Ivan Dufur.

For further information address

Dufur Osteopathic Hospital

J. IVAN DUFUR, D. O., President

AMBLER, PA.

Welsh Road and Butler Pike

City Office
611 Witherspoon Bldg.
Philadelphia

Telephones
Hospital: Ambler 7-41
City Office: Pennypacker 1385

RESTORING THE NORMAL FLORA

BATTLE CREEK HEALTH FOODS
NET WEIGHT 12 OZS
BATTLE CREEK DIET SYSTEM
"LACTO" DEXTRIN
REG U S PAT OFF
USED AND ENDORSED BY THE BATTLE CREEK SANITARIUM
A FOOD
FOR CHANGING THE INTESTINAL FLORA
THE BATTLE CREEK FOOD CO
BATTLE CREEK MICH U.S.A.

NATURE protects the body against intestinal putrefaction by encouraging the growth of fermentative or acid-forming bacteria.

Where, through dietetic errors and neglect of the bowel, conditions are made unfavorable for the growth of the acid-forming organisms, putrefactive bacteria become dominant in the colon, leading to auto-intoxication and constipation.

The best method of assisting Nature to combat putrefaction is to provide the right sort of food in the colon for restoring the normal acid-forming germs, namely, B. acidophilus.

Lacto Dextrin has been found an ideal food for this purpose. It is definite in its action, thoroughly rational and, therefore, to be preferred to the uncertain effects of drugs, chemicals or cultures.

Sometimes the additional use of Psylla (plantago psyllium)—a plant seed which provides bulk and lubrication—is advised for its value in correcting the associated constipation.

The rationale of Lacto Dextrin and Psylla is fully described in the scientific presentation "A Practical Method of Changing the Intestinal Flora."

Mailing us the attached coupon will bring you copy and package for clinical trial.

THE BATTLE CREEK FOOD COMPANY
Dept. A. O. 2, Battle Creek, Michigan

Send me, without obligation, trial tins of Lacto Dextrin and Psylla, also copy of treatise, "A Practical Method of Changing the Intestinal Flora".

NAME (Write on margin below) ADDRESS

An Invitation

A cordial invitation is extended to the osteopathic profession to make use of the facilities which are offered by the

HOUSE *of* FINNERTY

MONTCLAIR, N. J.

REGISTERED HOSPITAL

which includes complete osteopathic, surgical, laboratory, dental, radium and X-ray divisions.

Books, Literature, Charts

Page

A. O. A. 475, 476, 477, 478, 480, 483
Journal of Osteopathy 420
Osteopathic Journal of Laboratory Diagnosis 420
Ryel, Dr. Jennie A. 480
Saunders, W. B., Company ..... Outside Front Cover

Colleges, Training Schools, P. G. Courses

Kirksville College of Osteopathy and Surgery 416
Laughlin Hospital and Training School for Nurses 487
Norwood Clinic 482

Foods, Waters and Toilet Preparations

Battle Creek Food Co. 423
California Fruit Growers Exchange 411
Fleischmann Company, The 413
Horlick's Malted Milk Corp. 487
Kalak Water Co. ..... Inside Front Cover
Mellin's Food Company 414
Nestle's Food Co., Inc. 420
Vegex, Inc. ..... Inside Back Cover

Hospitals, Laboratories, Hotels

Dufur Osteopathic Hospital 422
Finnerty, Dr. Francis A. 424
Laughlin Hospital 487
Still-Hildreth Osteopathic Sanatorium 486

Instruments, Appliances, Equipment

Allison Company, W. D. 421
Aloe Co., A. S. 419
Burke and James, Inc. 479
DeVilbiss Co., The 414
Hayman, Dr. George T. 487
Kleistone Rubber Co. 415
National Carbon Company, Inc. 409
Philo Burt Mfg. Co. 415
Storm, Dr. Katherine L. 419

Miscellaneous

Classified Ads 487

Pharmaceuticals and Endocrine Products

Alkalol Co. 480
Deshell Laboratories ..... Color Insert
Harrower Laboratory, Inc., The ..... Inside Front Cover
Huxley Laboratories, Inc. 410
Menley & James, Ltd. 421
Merrell, Wm. S. Co. 417
Nujol ..... Outside Back Cover
Oakland Chemical Co. 475
Patch Co., E. L. 419, 421
Pneumo-Phthysine Chemical Co. 418
Squibb & Sons, E. R. 488
Standard Oil Co., The ..... Outside Back Cover
Warner & Co., Inc., W. R. 412

Professional Ads

Edwards, Dr. James D. 483
Professional Cards 484, 485, 486

Wearing Apparel

Cantilever Corporation 481
Nunn-Bush & Weldon Shoe Co. 483
Lape & Adler Co. 479

The Journal of the American Osteopathic Association

PUBLISHED MONTHLY BY THE AMERICAN OSTEOPATHIC ASSOCIATION

Vol. 28 CHICAGO, ILLINOIS, FEBRUARY, 1929 No. 6

Studies in Osteopathic Pathology

CARL P. MCCONNELL, D.O.
Los Angeles

V

Dr. Still gave more thought to pathogenetic problems than to those of technic. Osteopathic biochemistry, in the final analysis, rather than physical mechanics is the basis of both our science and art. This is not depreciating technic and mechanics. It is appreciating the chemism of the vital organism.

The mechanisms of restoration and repair are apt to be neglected. Specific therapy is dependent on distinctive pathogeny. Natural chemical immunity is the capstone of osteopathic science.

Those who came in personal contact with Dr. Still know that he had a rich fund of knowledge pertaining to disease processes, biochemistry and detailed applied anatomy. This was the reason of his remarkable ability. He had a true and well proportioned perspective of structural perversion, chemical processes and adjustment technic, based on the principle that the body contains all the attributes of a vital and physical mechanism. Maladjustment of structure is only one portion of disability. Technic is only a means to an end. These are parts of a greater whole. Satisfactory work depends on realization of the full osteopathic concept.

Medical nosology and objective do not fit into the osteopathic structure. The osteopathic setting, its fundamental concept, is unmistakably different from other schools of the healing art. Anatomical and physiological perversion exemplifies the gamut of disease history. It is inclusive of etiology, pathology, diagnosis, prognosis and therapy. Medical knowledge contains a wealth of observation and facts. So does osteopathic knowledge. The incorporation of these facts, correctly interpreted, correlated and applied into a science, classified knowledge based on anatomical structure and natural chemical immunity is the osteopathic contention. We believe this constitutes an impregnable position. Historical background, clinical results and modern development sustain this viewpoint.

Our present need is not more facts. Instead we require a clinical classification of present facts. Facts are so plentiful that many are unable to see clearly. They are lost in a veritable maze. They are not orientated to the few simple, universal principles. They lose sight of the basic point that the body is a vital and physical organism containing all the properties of health and repair. In a word, they are not osteopathically minded.

Technic methods have been made a fetich. Physical mechanics has overshadowed physiological physics. Diagnosis and pathology are too often neglected. Biochemistry is in the realm of an abstract problem. As a consequence technic routinism is joined to some medical concept of disease; an incongruous and incompatible situation. Technic cannot consistently and effectively follow some medical hypothesis. It must be based on its own fundamental derivation and pathological concept. Osteopathy must of necessity develop a rounded-out system. Its inherencies and resources fully warrant such a measure. Osteopathic pathogenesis and diagnosis are the essential problems. Then technic will drop into its own niche and not contain an element of incongruity.

A greater knowledge of osteopathic applied anatomy inclusive of histological order and chemism will solve many of our problems, round out the science and render clinical application still more effective. It is a field distinctively osteopathic, which must be elucidated in order that the inception of disease may be better understood. This will supply the data of early change of which well known pathological involvement is a sequel. Proportional relationships have been neglected. It will increase our knowledge of osteopathic diagnosis and prognosis. It will bring out in relief the essential operative factors of technic. It will furnish a rightly proportioned framework for the various fields of the osteopathic system. A system demands both comprehensive principles and detailed concrete facts pertaining to the entire vital structure.

This chapter of osteopathic science has never been written. There already exist many scattered facts. But the field needs intensive cultivation. A handful of our anatomists are at work on it. They should receive definite encouragement. The clinicians should keep in intimate touch with them. Their interests are mutual.

The greatest encouragement for all schools is that many disease processes tend to recover. By adding a change of environment, habits, diet and structure the tendency to recover is enhanced. All of this reveals the fact of natural chemical immunity. It clearly shows that therapeutic solution depends upon successful attack of the forces which change structure. Again it emphasizes the fact that the basic principles of osteopathy place the science in an impregnable position.

The reason why osteopathic technic has been successful is because it obtains results. This is obvious. Results could not be secured if the method

was not logical, scientific and consistent; that is, if it did not fit into a pathological setting of actual facts. This is equally obvious. But these facts should be intelligently used.

Much time and thought have been given to the physics of the spine. Naturally an understanding of normal mechanics and physiology is the first essential. Normal structure and function must be known in order to recognize the abnormal. The osteopathic concept, however, must be kept in view in this study. Disease is a result of abnormal conditions. Pathological processes must be understood before therapy can be intelligently applied.

Malalignment of osseous tissue is only one portion of disease history. It is a part of the clinical picture. The osseous change does not occur without substantial cause. Inception and perpetuation of the structural lesion are important aspects, though the physical mechanics is but one expression of a greater unit. Reciprocal conditioning and modifying relationships are ever present. In other words, pathological forces incept, modify and perpetuate the physical derangement. No aspect of the lesioned tissues remains in a normal condition. The moment the normal is changed a pathological state exists. The properties of the vital organism are engaged, a conditioning from within the mechanism. The principles of mechanics are applicable to only one part of the picture, but the vital properties transfer the physiological equivalents; for a physical mechanism is conditioned from without, while a biomechanism is conditioned from within. Consequently technic requirements can not be thoroughly understood without a knowledge of both physical and vital involvement. A technic based on academic or descriptive anatomy will not suffice.

Lesion Mechanics—In a previous article reference was made to the balancing forces of the spine being engaged differently from the normal in lesion production, due to fibrosis and resultant immobility. This would imply a relative shifting of the line of gravity commensurate with weight bearing and compensatory changes. Other factors should also be considered.

There is the shape of the individual vertebra and disk, and particularly the series of attached vertebræ and disks that make up the spinal column. It is virtually a curved rod. These structural characteristics with the imbalancing tension of the soft tissues in abnormalities determine the type of many compensatory curves and lesions. This is true of both perpendicular and horizontal spinal columns. Experiments on animals readily reveal this interesting fact. The mathematical laws of the simple curved rod that when side-bent and rotated engage a series of transverse planes at various angles with the longitudinal, whether placed vertically or horizontally, are applicable here. Add to these the direction of the articular planes, the effects of either an edematous or an inspissated disk, the tension of the common spinal ligaments, and the direction of pull of the muscles that move the column, and it is seen that the combined mechanics is complex and varies according to the exact location and character of the lesion. In the final analysis it is a resolution of forces. This makes an accurate diagnosis an essential for skilled adjustment.

Thus one can readily see that there are many possible variations of lesions and curves and gradations of same, depending upon architecture and its consistency, upon location and character of soft tissue tension, upon the disk's integrity, upon outside balancing forces, upon posture, asymmetry, and the pull of the central tendon of the diaphragm. Mathematically, the primarily immobilized lesion remains within the vertical line of gravity. Likewise compensatory changes follow mathematical laws, these coefficients being modified according to the pathology. Due to the physical make-up of the spine and its allied structures combined with their functions, innumerable gradations of lesions are possible, although the distinct types are few. All are expressed in accordance with comparatively few simple general laws.

In our opinion, Dr. Webster has added materially to the solution of the technic problem by his theory of the tripod support of a joint. The weight-bearing factor of pathology is given a place which has heretofore been largely neglected. It is mathematically demonstrable. It is clinically applicable. It gets results. A minimum of effort is required. The solution of the lesion is placed on an operative basis, exactly where it belongs. The primary lesion is considered a local and individual problem. It demonstrates the outstanding importance of precise diagnosis. The operation is a beautiful illustration of a skilled art being dependent on complete coordination between brain and hand, and on full development of the tactual sense.

There may be compensatory changes either above or below (or both) the primary lesion, depending upon the extent of immobility and displacement, and the shape and flexibility of the contiguous segments. This is also true of animals with a horizontal spine. Location and character of pathology determines the type of compensation. A local lesion within a compensatory curve is not infrequent. It is usually a phase of the compensatory change. But such would not be classed as a primary lesion, however disturbing it may be. It may require special attention in order to normalize it.

The question arises in technic adjustment as to the best method of securing normalization. Most any method that secures a degree of release and mobility will obtain some results, provided it is not accompanied by undue irritation. But "just any method" is neither satisfactory nor scientific.

It is exceedingly easy to lose sight of proportional values. Because our technic work is executed on the physical and mathematical plane is no reason why osseous displacement per se should dominate our thinking. At best it is only part of a whole, still it is the one tissue which gives solid support to the lesion. The character and degree of bony displacement is very important. In the vast majority of cases there is actually less displacement of the apposing articular surfaces or planes than in every day normal movement of the same. Two associated and neglected pathological factors may lead to confusion: One is the edema which is frequently mistaken for bony displacement; the other is the pathology of the disk.

On the one hand, a number let the bony adjustment aspect of therapy dominate their technic.

Their idea of actual bony displacement is out of all proportion to its role in lesion pathogeny. On the other hand, others are principally interested in soft tissue pathology. The mechanism of lesion production necessarily includes the entire segment.

Movement of the bones is an invaluable end in itself; so is employing them as leverages for therapeutically obtaining that end. But means and end and pathology should not be confused and jumbled. It is not gross dislocations that engage our attention but malalignments. Although we employ the bones as leverages, still it is not alone for the purpose to correct bone pathology. Although movement of bones expresses a certain condition, still it is not bone movement per se that secures results. Mathematical laws of the segmented and curved bony rod express certain mechanical movements, and aid us materially in understanding our problems and in applying our technic. But again, means should not be confused with either beginnings or ends. Nature converts or transmits the result of our applied physical force into biochemical equivalents or physiological qualities and values. It is the changed weight-bearing factor, the abnormalities of ligaments, deep muscles, disk and connective tissues, registered in osseous displacement, lessened elasticity and flexibility, rigidity and immobility that constitute the real therapeutic equation, not alone the dependent osseous malalignment. Apply a force that will release these abnormal tensions and bony displacement will usually take care of itself. True, we get at these tensions through bony leverages but recovery comes through the release of the soft tissue tensions that have perpetuated the lesion; not through the fact of bone movement per se, but which no one questions is a desideratum, a partial index of recovery and one factor of precise technic.

The object of this analysis is in the interest of more specific technic, based on the pathology of the unit, and not on one factor. We should be conversant with all the facts of osteopathic pathology. Hitching an "osteopathic treatment" to a medical chemical hypothesis is a curse.

Making technic an operative feature consonant with the pathologic findings of the localized and definite lesion will develop a technic that is scientific, skillful, and time and energy saving. Much of practical value will elude the technician if he doesn't obtain a true perspective of all pathological factors. All the forces that cause structural change should be intelligently attacked.

Movement of bones should not be confused with mobility of soft tissues, although mobility is improved through utilizing the bones as leverages. It more specifically applies the releasing force. But it is the character of the confined mobility, the pathology of immobility, the involvement of muscle, ligament and disk, that maintain the bony displacement. The primary bony displacement in itself would be relatively unimportant if it were not for the soft tissue pathology. Malpositioned apposition and rigidness are significant resultants. Lack of movement from a structural standpoint is a functional effect, but which in turn through its inhibition of nerve impulses, derangement of reflexes, and disorder of vascular and chemical properties causes nutritional disturbance in cord centers, sympathetic ganglia, and viscera.

In certain instances, increasing the mobility of soft tissues by balancing tensions and clearing up the debris, the bony factor will frequently take care of itself. This is frequently noted in a series of treatments, rightly timed and spaced, wherein the bony displacement at the right period succeeding preparatory treatment requires very little effort, if any, in order to normalize. But this is not true, as Dr. Webster has shown, in cases where two bony supports of the lesion have been moved. In these cases there must be a definite retracing of the path of lesion production, utilizing the principles of extension, sidebending and rotation, exactly applied. Both the character and degree of lesion change must first be diagnosed. In all cases not only should the lesion be adjusted, but the environmental forces that make it possible should also be corrected.

Employing definite planes and angles, with definite locations of power and weight, arms and fulcra consonant with the spinal architecture and the mathematical lines of restraining tensions, and with the change which modified pathological involvement has induced, is the only base for scientific technic. To repeat, the essential key is the location and character of the pathology. This is the distinctive quality that modifies an academic technic based upon adjustment of the normal spine. True, one has to understand normal spinal architecture and its laws of movement in order to understand its diseased modifications. The same is true of tone of muscle or the characteristics of any tissue. But not fully realizing the character of the pathology is the cause of much strong-arm work, of misapplied force and of employing relatively too long power arms, which literally and unduly tear and injure delicate tissues. The aim seems to be to adjust the bones, to get immediate movement of them, at the cost of everything else. No wonder then that there are frequent irritations and constant recurrence of the lesions. A slower adjustment method whose leverages are definitely and distinctly located, utilizing the minimum requirement of applied force, in harmony with the changing variations and degrees of tensions as recovery progresses, and which keep apace with nature's healing processes, is required.

Vertebral lesions demand a technic that is deep seated in its structural readjustment effects: a manipulation that merely loosens the superficial muscles is not sufficient. The pathology of a vertebral lesion that seriously involves the segment and the related viscera, and also perpetuates the lesion, is a deep seated derangement of the deeper spinal muscles, of the capsular and common ligaments and the intervertebral disk, and of the weight-bearing osseous contacts which have been shifted. The character of the osseous alignment is dependent upon the resolution of the tension forces of these muscles, ligaments and disks associated with the shape and curves of vertebræ and the direction of its articular planes. This determines the type of the structural lesion, whether flexion, extension; or a combination of side-bending and rotation. Unless there is a severe direct trauma, a crushing effect, which is comparatively rare, the lesion is commonly of slow development, both in structural displacement and in

fibrotic involvement. The displacement is mainly the result or an effect of the combined action of the soft tissue pull or tension, and maintained by soft tissue pathology. Owing to the deep seated edema and acidosis affecting the poorly protected sympathetic ganglia and the fibers supplying the deeper muscles, and to diapedesis, important pathological changes of cord centers and viscera result.

These are the reasons why a deep seated readjustment or loosening is necessary. Any method that accomplishes this will be effective, at least partially, provided it is accomplished with a minimum of operative strain and irritation; and also provided sufficient time elapses between treatments in order that nature through the action of the proteolytic ferment may clear up the debris. But naturally there are methods more skillful than others. These depend upon the detection or diagnosis of the exact character of the structural displacement. This is probably shown best by the exact location of the greatest immobility and the direction of its restraining force or pull. This represents the point where all the physical forces are resolved, that is, their maximum effect structurally. The important biochemical involvement of the lesion is located in cord and sympathetic ganglia. The technician influences chemism through the physical or structural plane. The physical condition by structural rearrangement is converted into terms of the physiological. Structure determines function, and normalization of one means normalization of the other. Consequently the sum of these abnormal physical strains or effects must be evaluated and the resultant physical effect definitely located before one can apply a specific adjustment.

It is obvious that there are but few simple principles under which these physical changes can operate. Normally the spinal movements are confined within the mechanical laws of its structure. But in lesion conditions the spinal movements are modified by the pathology of muscles, ligaments and disk. Although the principles are few, lesions are of infinite variations. This is owing to the variety of tensile changes possible in the soft tissues. Not as to the variety of type of pathological tissue changes, for these are few, as elsewhere in the body, following a few general laws of vascular, nervous and chemical changes; but instead a great variety based on the exact location of tensile fibers involved, which in turn determine the precise direction and degree of the tension that leads to immobility. Naturally, this is influenced by bodily conformation and texture, by posture and habits, and by the aggregate of the many environmental influences that make up the daily life. In a word, these enter into the infinite variations, the individualistic qualities of a lesion. There is no desire to labor this point, but after all, any abnormal structure, the same as a normal one, is a condition of the body, generally and locally, that reflects its individual qualities. And an important part of diagnosis, in fact the most important part, is the summing up of the total clinical picture. Even after what seems to be the most important tension of the immobility has been released, frequently some other tension of the lesion which was a contributing factor to the first picture, and thus more or less masked, will show up as the most important phase that requires attention in succeeding adjustment.

There is no question that utilizing the general mechanical laws of the spine, of flexion, extension, side-bending, and rotation, is one useful method of technic. But, in the first place, lesions are not usually characterized alone by excessive bony displacements, but by the pathology of the other tissues. Secondly, utilizing long power arms, and relatively short weight arms, in leverages for adjustment, an unnecessarily severe technic is employed. The tissues may be seriously bruised, thus delaying recovery; and the patient cannot cooperate so easily by consciously relaxing. Still this method has its uses, much depending upon the skill and experience of the operator.

For the reason that the pathology of soft tissue, and not alone the malaligned bony relationship and extent of deranged spinal movement, characterizes the lesion other methods may be easier and more effective. Of course lack of movement of the joint is part of the pathology, both effect and cause. But it is first due to the changes in the soft tissues—an effect. As a cause it is secondary to the first, increasing the inhibitory effect to afferent impulses and adding to circulatory stasis. Thus a technic method that primarily considers the tensions and rigidity which leads to immobility of the deep seated tissues, and which releases them, is a sound method. The old method of "exaggerating the lesion" is based on the pathology. By placing a strain or tension on the tissues that tends to increase the lesion until it slightly gives, disengages its immobility, means that pressure is brought to bear on a plane corresponding to that of the resolution of the lesion tension forces. This is important in sensing its exact direction through the feel of tissues. It places the field of operation under direct control. It puts a longitudinal tension, through first exaggeration and then movement correction, upon the tissues that require freeing or loosening. This means a minimum of injury. It allows the "house cleaning" ferments to more quickly do their part. Adventitious contractions of muscles are circumvented. Specificity of physical lesion adjustment is greatly enhanced. In a word, it means a return of the balance of lesion tension over the very road it took in its pathologic course. Thus it is consonant with both underlying physical principles and the possible infinite variations that pathologically characterize a lesion.

(To Be Continued)

Handling Nervous Patients.—Few tasks tax the skill and ingenuity of the doctor so much as the management of nervous cases. In the doctor's office neurotic patients are likely to show the same whims and temperamental qualities that make them so objectionable to people who do not understand them. They may have false modesty about being examined, question the doctor's method of treatment or even presume to differ with him with regard to his professional advice.

The experienced doctor has learned to expect unbecoming behavior of this sort from his nervous patients. He does not take offense, for he knows that they represent not a deliberate affront to his dignity but part of a nervous illness. Tact but firmness in handling nervous patients is the first step in their successful treatment. —*The Clinicist.*

A Symposium on the Science and Art of Osteopathy

PAPERS COLLECTED BY PAUL VAN B. ALLEN, D.O.

Structure—The Basic Determinant of Body Function

WILBORN J. DEASON, M.S., D.O.

Did anyone ever see an amœba faint or a mule suffer from neurasthenia? Surely not. The exaggerated physiological reactions necessary to bring about such functional perversions would require a much more highly developed, and a far more greatly differentiated structural mechanism than either of these animals possess. One might as well expect a wheelbarrow to thresh wheat.

Function not only depends upon structure and structural relations, but it also requires a suitable or adapted structure, and differentiated or specialized function requires a more highly differentiated or specialized structure for its performance.[1]

The primitive and essential functions of protoplasm are performed by a relatively simple single-celled animal organism, but even here there are certain structurally different parts for the purpose of performing such functions. Passing to another stage, the colonial Protozoa, a beginning of cell differentiation may be noted, and still further, in the Volvicinia, the outer cells of the group assume very definitely the beginnings of specialization. Here the outer cells take on the function of irritability, leaving other functions to other cells or cell groups of the now many-celled group, or metazoan.[2] From here on one may follow Haeckel through many interesting stages showing how structure and function have developed together.[3]

Spencer's definition of life as to continual adaptation of internal structure to external environment might suggest that there exists a constant demand for change, requiring that as new demands for new functions arise, new or differentiated structure must be developed to meet such demands. This of course is true. As external conditions change the animal to survive must migrate, hibernate, adapt or die. But this does not mean that function rather than structure leads in evolutionary development. It does mean, however, that those animals having the proper structure for performing the functions essential to life under such given environment will live and perpetuate their kind.[4] Thus again it may be seen how function depends upon structure.

This ever constant change and demand for continued change in physiological economy renders a physiological normal or biological standard practically impossible of determination.[5] And here again, another biological law becomes apparent, namely, that not only does function depend upon structure, but that structural-functional relations must be maintained somewhere near a constant balance that a near-normalcy of function or physiological balance may be maintained.

In the progress of evolutionary development as differentiation continues to complicate structure and to render certain functions more definite and different, there arises a demand for the control and balance of these various functions, and so a special structure—the nervous system, comes into existence.

It must not be forgotten, however, that the nervous system is as much a part of the body as is any other differentiated body structure, and while it has much to do in the excitation to action and control of practically all other body structures, it, in turn, is controlled by body functions. The same environmental conditions about a cell, such as supply of nutrition in the form of complex proteins, oxygen, etc., and the elimination of wastes are essential to the function of nerve cells. Since so many centers of nerve control lie within the spinal cord, it may readily be seen why normal physiologic conditions in and about the cord are essential to nerve function.

Another biological theory, namely, that as differentiation of structure progresses its resistance is decreased, applies. In certain instances this is well known. The nervous structures of the eye, for example[6] (following the just-mentioned case of the outer cells of volvox), become very highly differentiated, and are, perhaps, the least resistant of all body structures. The same is true of the ear, and in proportion, of the other special sense organs. Here again is another example, not only of the dependence of function upon structure, but of the fact that as special function requires a highly specialized structure it suffers proportionately in resistance.

Had this process of differentiation continued indefinitely without some means of control other than that of the maintenance of physiologic balance through the nervous system, perhaps only a comparatively few, and those only the far more simple species, could have come into existence. There was needed some mechanism or means for automatic body protection, and this came either as a demand of or for such function, or it was automatically and progressively developed as an additional or primitive function of the simple cell. I am not sure but that we might add to the other primitive functions of protoplasm that of immunity, for there is much reason to believe that this function, however it may be explained, has always existed. Throughout all time of existing living organisms, the constant demand for the adaptation of internal structure to external environment encouraged the development of mechanism suitable to increase resistance. This condition being ever present, that is the demand for such function, the various animal species simply had to develop it, or that species ceased to exist.

Resistant mechanism would, of course, not be confined to that which we know as gross structure —not even to microscopic structure, but to all of those things or biological reactions which would tend to increase resistance.

The development of special resistance or immunity to various body "poisons" comes naturally

upon stimulation as the potential or determinant structure is ever present.

"Striking examples are afforded by the phenomena of immunity to attacks by microorganisms, and to the action of poisons. Still more remarkable instances are those connected with the recovery of function or reproduction of tissue after injury or disease, or even complete loss of parts of the body.[5]

This is but a brief summary, and all too poorly connected to carry a logical theme, but it does suggest a line of thought that is worth while in the study of structure as a determinant of body function.

SUMMARY

1. The cell constitutes the structural and functional units of the organism, and function is not only determined by, but varies with, the cellular structural mechanism.

2. Various cells have undergone certain processes of differentiation in the course of phylogenetic development of the species, and now in the higher forms certain organs thus formed are capable of more highly differentiated function as needed by the complex organism.

3. The cell is to the organ as the organ is to the body, each dependent one upon the other.

4. The unity of functional relationship or the physiologic balance of function is really a most important determinant in the maintenance of body health.

5. Every cell in the body bears a certain functional relationship to every other cell of that and other organs, and, likewise, every organ bears a certain functional relationship to every other organ. It is this sum total of function that determines body function as a whole.

6. The failure of any structure or group of structures having a common function, may, and usually will, cause an unequal balance, detrimental to health.

7. In the ever changing demands for adaptation, the nervous system—the regulating mechanism—is constantly called upon, and here is, by virtue of its high degree of differentiation, a structure that is likely to suffer first.

8. Structure is affected by function. This is equally as true as it is true that structure determines function, but this problem is not within the province of this paper.

9. The balance of function or the automatic regulation, the functional control of structure as affected by nervous and other structures is of very great importance in the maintenance of health.

10. The constant demand of function requiring continued adaptation of internal structure to external environment, has built a condition of natural resistance in all animal organisms, varying in degree from the simplest to that of protecting against various poisons accidentally received, and the regeneration of lost parts of body structure by use, degeneration or injury.

APPLICATION

In the progress of the organic sciences, there has been comparatively little accomplished by research workers in the application of biological principles to therapy. The workers in our universities are usually little interested in internal medical therapeutics. They, for the most part, accept therapeutic tradition largely because too much effort is required to do otherwise. And yet one may say with little fear of contradiction, that they are those possessed with little rather than much actual knowledge of pharmacology and allied branches who have great confidence in internal medical therapeutics.

It was Dr. Still who first advanced a theory of the universal application of biological principles to the maintenance of body health and also as a method of therapeutics in disease. Dr. Still was a student of the old school of biologists represented by Spencer, Huxley, Darwin, Haeckel, and others. This I knew from personal association with him. In addition to his reading, Dr. Still was a keen observer, and had that rare ability of applying what he learned.

In considering the etiology of disease, Dr. Still always urged that we look first at the causes that maintain normal health, and then reason from cause to effect. "Learn the normal," he urged, and "you will recognize the abnormal when you find it."

The anatomist of the old school studies body structure and applies his findings in surgery, but where and in what manner does he apply such knowledge in the actual practice of so-called "internal medicine" which refers to practically everything else in therapeutics?

The physiologist of the old school studies body function and has learned much, but here again, how much of this knowledge is actually applied other than in the remotest fragmentary manner in medical therapeutics?

Dr. Still's theory of osteopathy is primarily and basically a theory of the laws of structure and function as applied to the maintenance of normal health and immunity to disease. In this it resembles other great theories, such as Darwin's pangenesis, or Haeckel's theory of ontogeny and phylogony—osteopathy is a theory or system of therapy only secondarily.

In this respect and as a theory of therapy, osteopathy differs completely and distinctly from any and all other schools of therapy, because not one of the others has, or ever had, even a hint of universal basic theory founded upon definite biological fact.

The histologist of the old school has delved into the realms of cellular life, has made some progress in correlating microscopic anatomy with physiology, but here again, except in exceptional instances, has made little or no advance in the problems of health and disease.

The pathologist of the old school has learned much of the nature of tissue change as a result of disease; of microscopic cellular change concomitant with disease, incidental pathology it might be called, but what has he done to determine those cellular changes that bring about functional perversion, and which lead to actual causes of disease, or of the causes of gross pathology?

The bacteriologist of the old school has accomplished many truly remarkable advances in scientific knowledge pertaining to microscopic life, and

has in many cases traced the undeniable relation of certain microorganic flora to certain diseases. And this being the brightest ray of hope of the student of internal medicine and of surgery, the microorganic theory of disease, likewise the vaccine and serum treatment, has been grossly over-credited. The medical profession, and because of the extensive propaganda, the laity, have naturally accepted most of such teaching as truth and call it modern science.

No problem has received half the attention from medical research as has vaccine and serum therapy and allied subjects during the past thirty-five years, and yet how little has actually been accomplished therapeutically!

The application of many biological principles has accomplished truly remarkable advances in surgery. But surgery and internal medication are wholly different. Surgery is more closely allied to osteopathy, both in theory and in practice, than to any other school of medicine. In fact, osteopathy is surgery—no less, but very much more. Osteopathy is the universal application of surgery in its broader sense, applied universally in therapeutics.

As a theory of the mechanism by means of which normal health is maintained through structural-functional balance; of natural body immunity and of therapeutics, osteopathy differs from all "Schools of Therapeutics" only in that it has its distinctive teaching and application of the principles of the basic sciences. Osteopathic anatomy, osteopathic physiology, osteopathic pathology, etc., have made such progress that only the bigoted or the uninformed would deny their distinctive and definite existence.

The time must come when this indefiniteness, this carelessness and haphazardness in therapeutics will cease. The universal acceptance and application of biological law must ultimately be applied. No theory of therapeutics can be scientific which does not consider the biologic causes which maintain health and body resistance. The osteopathic theory must, therefore, at some future time come into full recognition.

REFERENCES

[1]Darwin, Charles: Origin of Species.
[2]Wilder: History of the Human Body; chapter on ontogenesis.
[3]Haeckel, Ernst: The Evolution of Man.
[4]Darwin, Charles: Descent of Man.
[5]Haldane: Organism and Environment.
[6]Kingsley: Comparative Anatomy of Vertebrates.

The Osteopathic Concept of Etiology

CARL P. McCONNELL, D.O.
Los Angeles

The fundamental aspects of the body, whether pertaining to the physical or chemical, are intimately related and interdependent. This is true of all circulatory, nervous and chemical phenomena, of structural and functional relationships, and of structural continuity and functional unity. Physiological physics and biochemism do not represent independent processes or planes, but instead are parts of a vital whole. Contingency is always manifest.

Dr. Still stressed the physical plane because it is both an indispensable and a neglected field, although he was no stranger to chemism. Furthermore, he realized the potential completeness of the body provided structure is intact and diet and environment approach the norm. The properties of both bodily physics and chemism are inherent. They are sufficient to maintain health, prevent disease and repair tissue when structure is normal, function exercised and food requirements met. Disorder or disease is present when structure is perverted or when chemical supply is impoverished. Chemical impoverishment, however, is not always due to faulty supply. It is frequently caused by disability of the structural mechanism.

It is a curious reflection on medical science and progress that no school prior to the osteopathic viewed the body from a comprehensive mechano-physical standpoint, though admitting that the physical is indispensable to the chemical, that it should be intact and exercised in order to promote and maintain health, and that physical rehabilitation is the essential work of the surgeon. The growth of surgery has been phenomenal, steadily encroaching on the field of the medical internist till it would almost seem that the internist's main forte is holding a diagnostic sack, and then fairly often is brushed aside at the operating table or autopsy.

The one-sided chemical viewpoint has not withstood the acid test of clinical results. If it had, surgery and osteopathy would not have made such remarkable strides. Chemotherapy has simply attempted the impossible, somewhat similar to the "half truth" of the "mental" school.

So it is not surprising that three important facts have been developed through osteopathic evolution. First, structure determines function; secondly, natural chemical immunity is dependent on structural intactness; and, thirdly, operative adjustment will set structure aright.

The osteopathic concept of etiology is that the forces which change structure are of primary importance. These forces are innumerable, ranging from the inherited and congenital to the ever-present environmental. The effects upon structure are of infinite variety and variation. Although the simplicity of the essential, like structure determines function, the discovery, analysis, correlation and application of the many factors require much first-hand information and experience. For there is no formula to follow or routinism to indulge. General biological principles are the only guide, for the complexity of a given case is characterized by its individuality.

The structural reaction of an individual to his environment embraces every act of the daily life. These structural registrations are just as much a part of the bodily condition as any other portion of the organism. They not only give definite clues to the health status but they register the character of the environing forces. Furthermore, if they are not harmonious with normal condition of the body they lead to progressive involvement of nervous and circulatory functions. In order for them to be understood one should be thoroughly conversant with both structural registrations and environing forces. If they are not harmonious with functional requirements, structure is impaired, both mechan-

ics and chemism are upset, and a prediseased state exists. Herein lies the osteopathic concept of etiology. It is a significant part of the natural history of disease.

Thus it is seen that abnormal conditions are not alone revealed by subjective and chemical manifestations. Although these are not to be ignored, they are only part of the clinical picture. Osteopathic science discovered the structural counterpart, and developed a structural etiology, pathology and therapy. This is a field as rich in manifestations as any other. Moreover, in view of the significance of structure, the importance of their discovery and evaluation cannot be gainsaid. That the chemical phenomena are important and relevant is beyond question, but rather such changes are only part of the biological equation. They are factors to be considered, but only in their relationship to others.

The osteopathic concept of etiology has revealed an unmistakably new world of structural phenomena. It is a field hitherto unknown to exist. Osteopathic development has organized and classified the knowledge into a science. Pathogenetically, diagnostically and therapeutically this wealth of fact is beyond parallel. There is before the clinician a vast mass of structural signs and conditions to be elucidated; structural material bearing on conformation and configuration, tone, elasticity and mobility, consistency and density, and position and relationship.

This represents a wealth of facts that are not merely to be observed: they should be felt, tactually appreciated in order to ascertain their important role. Thus a veritable new world of phenomena is placed at our command. This is the significant feature of osteopathic etiology. It gives the clue to etiologic forces, and no less points the way to recovery. It lessens the heretofore relative importance of the chemical values. Not that they do not exist, but rather it gives appreciation to physical factors.

The physical field constitutes a universal plane to all organs and tissues, which when damaged produces and maintains functional disturbance. It requires experience, skill and judgment to interpret its signs. Just like the universal field of blood chemistry reveals both local and general phenomena to him who is able to read its meaning. Minutiæ, initiative and broad viewpoint are important.

Were it not for the inherent properties of immunity, repair and recovery it is evident that the bodily mechanism would not be a vital one. It is equally evident that structural position and relationship is of prime importance; basically an essential. Not that its role is merely confined to the principles of mechanics, but it also enters into the properties and functions of vital processes, no less so in its way than the principles of chemism. It is the interdependence of part to part and to the whole that makes the organism what it is.

That disabled structure impairs inherent properties is just as certain as the effects of a deficient diet or inharmonious environment; in fact, environmental conditions are largely expressed through the structural mechanism. All of these are of basic import in the realm of etiology. Action and reaction are no insignificant terms as applied to the bodily processes. It means either normality or abnormality. In either instance the forces are registered on the structural pattern. Consequently the structural pattern in view of its relationship to vital processes (in fact, being a part of them) is just as important and significant as the chemical one. And in many instances it is more important, for it is the vehicle of support of tissues and exchange of fluids and impulses. Both the structural and chemical are expressions of vital equivalents. The one on the plane of physiological physics, the other presenting the biochemical aspect. Still they represent respectively the two sides of a shield.

It is in this chapter of the early beginnings of disease that the osteopathic concept is so supreme, though at all stages of disease with many possible exciting and complicating factors the structural status retains its underlying import. It is a field that has heretofore been overlooked. The early beginnings of disease, the predisposing factors, the prediseased state of circulatory stasis and afferent inhibitions that lead to organic impairment and lessened resistance is of greatest importance in not only obtaining a true perspective of disease history but also in the field of prevention. It constitutes a biological chapter of the utmost significance. It adds materially to our understanding of immunity.

The import of structural conditioning and of surgery has long been recognized. The osteopathic concept does no violence to the same principles. In fact, it carries them out logically to the very minutiæ of all tissues, to a detailed mechanical degree that is harmonious with their functions. It consistently fills a heretofore physiological gap in the etiologic field.

The practical application of the osteopathic concept is fraught with many difficulties. The same is true of the principles of surgery. Practical application demands much experience and close study on the living subject. Living pathogeny is extremely varied. To attain to sound clinical sense requires close application of all diagnostic methods, of which palpation is second to none in value. The feel of structure, its temperature, tone and consistency, its elasticity and resiliency, and its alignment, comprise a vast world to the clinician who is able to interpret it. The various structural registrations are vital reactions, no more nor less. If he is able to interpret his findings, analyze and correlate them, and then evaluate them diagnostically he possesses a method that is invaluable.

Then what is of equal value to this etiological concept and diagnostic method is that the therapeutic indication is consistently based on the pathology. There is no gap to be bridged, that is, between etiology and therapy. The fields of osteopathic science comprise a consistent whole. The same principles of viewpoint and application are enlisted. The feel of structural tissue revealing its status of consistency and position are equally important in etiologic elucidation, pathologic determination and therapeutic application.

There is no question that discordant environmental reaction is an important cause of disease. The effect on structure and dependent function is

well known. It results in an imbalanced state of muscular tension, skeletal abnormalities and a slumped posture. This means lessened tone of tissues, strained ligaments, osseous malalignment and displaced organs. The effect upon circulatory channels and nervous courses is one of obstruction and impediment, leading to organic disorder. A distorted organism means a crippled mechanism. Although adaptation and compensation are dependent upon inherencies and margins of safety, nevertheless reserves and resistances are proportionately lessened and impaired. The osteopathic lesion distinctly predisposes to infectious sites and toxic states.

Why should the organism be primarily considered (and oftentimes entirely) from the standpoint of chemism when its vehicle is a physical one? Recognizing that the chemical constituents and their properties are indispensable, why neglect the equally indispensable physical arrangements? Especially in view of the fact that the body contains the attributes of both a vital and physical mechanism. Associated with structural intactness is natural chemical immunity. Arterial supply and nervous impulse are beyond doubt controlling forces. Either may be disordered by physical derangement, marking the early beginning of disease. Freedom of mechanical structure, rational diet and right living constitute the requirements of normality of the combined physiological physics and biochemism of the vital organism. Changes in the physiochemical system affect the energy relations, of which adaptation to environment is an actual part of the living process.

Structure and Immunity

R. N. MacBain, D.O.
Chicago

Ehrlich says that the development of immunity to bacteria and toxins is an inherent property of living tissues. All forms of treatment for infective diseases are based on this premise. There is no form of therapy which doesn't have as its essential purpose the stimulating and assisting of this inherent body function.

In the majority of forms of immunizing therapy in vogue today, the purpose in view is to stimulate artificially the production of immune bodies by small or attenuated doses of a specific infective agent. In many of the less specific infections the object of treatment is to support the patient by general care to give the least possible interference to this body function.

In a few diseases, notably diphtheria, tetanus, and more recently scarlet fever, the immune bodies are produced in another species of animal and transferred through injections of the blood serum of these immunized animals to the patient. This last measure is in reality not an immunizing procedure to prevent the disease, but is used as a therapeutic measure in the treatment of the disease. The purpose is to add to the natural immune bodies developed by the individual some antibodies already formed in another organism. This measure has no effect on stimulating the patient's own ability to resist—in fact, it is usually depressing to the general body economy.

The osteopathic conception of immunity is that immunity being a vital body function, those measures that stimulate, naturally, general body function are always indicated in dealing with an infection. The opinion may vary with some as to whether or not the use of artificial immunizing agents is effective and indicated. Many believe that in the production of an active immunity, by artificial means, the effect produced on the general health outweighs the advantages gained by the production of what at best is but a relative immunity.

To date, the diseases that have been most effectively controlled have been attacked through the agencies of sanitation, quarantine, isolation, and an attack on the sources of the infective organism.

There is a strong conviction among many people that the increase of degenerative diseases can be traced partly to the widespread introduction of foreign biologic products into the human system. It is going to take many years—and the practice of immunology is still comparatively young—to determine this point. We have all known instances in individuals where a complete course of immunization—toxin-antitoxin for diphtheria, anti-scarlet fever immunization, smallpox vaccination, and typhoid vaccination, given at comparatively short intervals have had disastrous results on the individual.

Considering the reaction produced by all these agents, the practice of some institutions in submitting their personnel to them seems almost inhuman. It naturally raises the question as to whether or not it would be better for the individual to take a chance on his natural resistive powers than submit to a procedure which has very certain deleterious effects on his health in general.

In the other group of cases, those in which a passive immunizing agent is introduced into the blood stream, the same doubt arises. To those who have such an effective therapeutic measure at command as our profession gives, there is additional ground for consideration. We do know that the much-vaunted anti-scarlet fever serum has proven ineffective in altering the morbidity or the fatality in some large institutions. We do know that fatalities do occur in diphtheria in spite of large and early doses of antitoxin. We do know that these therapeutic measures are attended with risk, and their administration frequently marks the beginning of serious constitutional disturbances on the part of the patient. We do know that many of our profession have treated successfully a large number of both diseases.

Whatever may be our views as to the efficacy of artificial immunizing agents, there are none of us who would be content to let our therapeutic measures rest there, or to consider that we were without effective therapeutic measures quite independent of vaccines and sera.

The part played by structure in the process of immunity is the distinctive osteopathic contribution to the science of immunology. As M. A. Lane pointed out, Dr. Still was the first on this continent to glimpse the modern conception of immunity as an inherent body function. Dr. Still was first to

bring out that an individual's general immunity varied as did his general body health, and that the local immunity of any tissue or organ was in proportion to its supply of arterial blood and freedom from interference with the flow from it of venous blood and lymph.

Our tissues are constantly exposed to bacterial action. Saprophytic bacteria abound in nature and the immunity to them is as much a function of living tissue as is metabolism. When life ceases this immunity disappears, and animal and vegetable tissues are rapidly broken down by bacterial action. This bacterial action is essential to the continuance of life because it liberates nitrogen which goes back into plants and is again used to sustain life. Life would be impossible without bacterial action, and life would likewise be impossible without immunity. H. G. Wells draws a fanciful picture of an animal from Mars quickly dying on this earth because, coming from a region of no bacteria, it had no immunity and was soon destroyed by the bacterial life on this planet.

It can be readily seen that the difference between pathogenic and non-pathogenic organisms is relative, and that the one can be pathogenic to one species of animal and non-pathogenic to another. In the same way a certain organism can vary in its pathogenicity to different individuals depending on their immunity, and can vary in its pathogenicity to an individual at different times.

The problem of immunity to disease is a problem of antagonism between the individual's forces and the virility of the invading organism.

The immunity to infections of the body as a whole is first of all, in many cases, a problem of the local immunity of the tissue through which the organism enters.

To quote Ehrlich again:

> But we have seen that immunity represents nothing more than a phase of the general physiology of nutrition, a view in which I agree entirely with that distinguished investigator Metchnikoff. Phenomena entirely analogous to those of the formation of antibodies are constantly occurring in the economy of normal metabolism; in all kinds of cells in the organism, the absorption of foodstuffs, or of products of intermediate metabolism, can lead to the formation or the thrusting off of receptors.

It is believed at the present time that the tissues most concerned in the production of immune bodies are the reticulo-endothelial tissues—connective tissue and blood vascular tissue. The production of a local immunity depends directly on the free interchange of circulatory fluids. Again we may see that the immunity of a tissue is directly proportionate to the efficiency of its blood supply.

> There are important non-specific causes for alterations in local immunity, as is the case with general. These practically resolve themselves into the presence or absence of an adequate supply of blood; the more copious the supply of healthy circulating blood, the greater the resistance to infections, and vice versa. Hence the utility of fomentations and other hot applications in the initial stages of an infective lesion; hence, too, the application of Bier's method of passive congestion, in which an excess of blood (though partly stagnant), is made to flush the tissues. And there is no doubt that the object of the dilatation of the vessels and acceleration of the flow of blood through them which occurs in the early stages of inflammation is a beneficial process which has this improvement of the local resisting powers as one of its objects, the influx of an increased number of leucocytes and the dilution and removal of the soluble toxins being others. In acute inflammation we may distinguish two stages. In the first, the stage just mentioned, the conservative reaction of the vessels is most obvious, and in the case of a mild infection, or if the immunity is very strong, may suffice to destroy and remove the infective material and its toxin. The stagnation and ultimate cessation of the blood-flow are indications that the irritant is, temporarily at least, getting the upper hand, and, by cutting off the blood-supply, is neutralizing the most powerful defensive factor. The acceleration of the flow may be regarded as physiological, the retardation and cessation as pathological.[1]

This brings us back to the fundamental principle of osteopathy—that normal structure is the biggest single factor in maintaining an uninterrupted blood and nerve supply to any part.

The area of the body where the effect of structure on immunity is easily and definitely seen is in infections of the head and neck. Any lesion of the upper dorsal vertebræ and ribs contracts the cervical muscles attached to them. The effect on the circulatory fluids is then twofold: mechanical interference with drainage and the disturbance of the sympathetic vasomotors to the head.

The circulatory stasis resulting decreases the alkalinity of the blood and lymph by the accumulation of CO_2 radicals. The activity of the cells is inhibited in every way and their ability to produce their immune products is decreased.

The disturbed balance of the sympathetics affects the vascular system from the arterial and motor standpoint and upsets the mechanism of the flow of arterial blood to the nose and throat. The clinical demonstrations of the results of normalizing circulation in this region are many and convincing. As a prophylactic measure in beginning colds, sore throats, etc., restoring normal interchange of fluids is the most effective single measure known. It is equally true that when the infection has gained a foothold it is a much more difficult fight. But then, are not the failures of all 100 per cent sera explained on the basis that they were not given early enough?

The blood-forming organs are the important sources of formation of the immune bodies in generalized toxemias and infections. The spleen, ribs, and marrow of long bones, all lymphatic tissues through the body, have a part. As has been demonstrated, the lymphatic circulation of the body is vital to immunity. All these things are associated with the structural integrity and function of the articulations of the thorax.

Many low-grade infections gain a foothold in individuals of asthenic disposition. The gastro-enteroptosis and low blood pressure of individuals suffering from chronic arthritis is classic. There is a noticeable deficiency of circulation associated with structural changes in the dorsal area.

The control of circulation for the whole body is controlled by the nerve centers in the dorsal spine (free respiration and unhindered heart action are dependent on a functionally healthy thoracic cage); circulation to the head and neck (most common avenues of infection) is subject to interference from upper ribs—the lymphatic flow of the body results from movements of the thoracic cage. Can we not say that the most important structures in the consideration of immunity are the dorsal verte

[1]Emery: Immunity and Specific Therapy.

bræ, ribs, and the structures entering into their articulation?

In conclusion let me say:

I. The efficacy and desirability of artificial immunizing agents is open to question and is by no means clinically established.

II. In spite of the marked changes and often contradictory results in the theory and practice of immunology during the last twenty-five years Dr. Still's expressions of the basic factors in immunity are on a firmer scientific foundation than ever, and the clinical application of these principles has been satisfactory in the experience of all of us.

III. Immunity is a property of living tissue, and as such it is at its highest efficiency when environmental conditions of the tissue are best.

IV. The greatest factor in maintaining normal tissue environment is normal structure and free circulation.

V. The most frequent site of structural abnormalities having an effect on general body immunity is the thoracic cage.

25 E. Washington St.

The Scientific Philosophy of Osteopathy

Orren E. Smith, D.O.
Indianapolis

In the busy life of the osteopathic physician there is not much time to study out the philosophy of osteopathy—to think through those subtle effects of treatment upon the organism. In an office full of patients, action is mandatory, while philosophy is optional.

However, if we would go far on the road to the solution of all health problems, we as a profession must dream, ruminate, speculate, and philosophize; we must account for phenomena and, if you please, osteopathic phenomena, because the reactions from osteopathic adjustment of anatomy are vastly different from reactions produced by drug medication. Ours is a new field of research and practice in which the phenomena have a different manifestation and interpretation. The fine keen insight into cause and effect must be summarized and evaluated.

If the case is to be cared for intelligently and satisfactorily the reactions from treatment must be followed from week to week, and evaluated at their true worth. Reactions write out in plain language the response of the organism to treatment. No physician should ignore or fail to understand this highly useful information to him which such reactions reveal. The necessity for change in treatment may come with lightning rapidity and mandatory urgency, because of cumulative reactions from treatment. Then again the reactions may come on very slowly and subtly—almost unnoticed by the physician unless he is watching closely and anticipating the effects that arise from treatment.

If the physician has thought about the case in terms of anatomy and histology, physiology and symptomatology, if he has pictured to himself the tissue reactions as expressed in vital phenomena as they are spread over before him in reactions to treatment each time the patient has returned to him for treatment, then he need not fear the most rigid questioning by the anxious mother, or the keen minded business man and father, because he will be far in advance of all others interested in the case in his reasoning and philosophy of the case. Not only will he be able to talk intelligently about it and answer questions, but he will be able to point out many minor and subtle changes that are taking place which will be interesting and illuminating to relatives and family. The doctor's keen insight wins the family's confidence, cooperation and fidelity—exceedingly desirable and often necessary elements in crises.

The scientific philosophy of osteopathy has not developed as rapidly as the technic for correcting lesions. Our actions are in advance of our reasoning. We have used our hands more than our heads. This leads to blundering and failure in practice. There must be something more to the practice of osteopathy than the mere correction of lesions. The ignorant thrust at the anatomical lesion without knowledge of why such adjustment is used does not lead to scientific analysis of disease, nor does it maintain an even balance between structural change and functional reaction. To produce reactions from treatment, such as to increase the blood pressure abruptly, in some cases may be fatal; to inundate the body with large quantities of toxic substances from treatment may put too great a strain upon the excretory organs of the body; to administer radical corrective treatment to frail and delicate patients is very unwise and may do much harm.

Our profession has yet to learn that we have in our possession an exceedingly sharp knife in the powerful technic which some of us use in correcting anatomical lesions; and that its use must be accompanied at all times by scientific knowledge of its effects. To know how to use powerful technic, and when to use it, is knowledge that all of us should covet and use in correcting lesions.

When we approach the scientific philosophy of osteopathy we enter at once into the field of law. All science is based upon law. The basic foundation of osteopathic philosophy is built upon law—law which is fixed and changeless—therefore all functional reactions of the organism become reliable and constant in obedience unto laws which govern their production. The discovery of osteopathy revealed the basic principles of health, upon which laws of health have been formulated and codified.

Structure determines function. This is the first law of the organism. This law is not only a biologic law which applies to both plant and animal life, but it is also a law of mechanics.

A piano is constructed to produce music; an automobile for transportation; a telephone for communication; a telescope for vision; a watch for keeping time. The structure of the machine determines its use—*structure determines function.* No one would think of using a watch to telephone a message; or a piano for transportation—the structure of the machine determines its use.

We see this law so plainly in mechanics, why cannot we see it in relation to the human body? The osseous system of man was made for support, resistance and protection; the muscular system for

movement—and action; the respiratory system for oxygenation of the blood; the digestive system for elimination of waste from the body; the circulatory system for circulation of the blood to carry nutrient material and end products of metabolism; the nervous system for executive control of the whole organism.

This law of anatomical structure is basic and fundamental to all functional expression. It is a self-evident fact that structure precedes function—we can not have expression of vital phenomena of any kind without first having structure through which to express them. We cannot see without eyes, or hear without ears; nor can we move without muscles, or think without brains.

This fact is so obvious it seems a waste of time to call attention to it; and yet needs of the profession would seem to justify the emphasis. We have not yet learned to think of health and disease in terms of structure and its relation to function; and until we, as a profession, do come to this point in reasoning about disease, we are doomed to mark time in our progress. The call for materia medica is tantamount to admission of failure to handle the case by osteopathic treatment. And let us state frankly that there are some cases which may not yield to osteopathic treatment. We cannot hope to cure all cases by our method of treatment—Dr. Still himself failed to cure some cases—but all graduate physicians in our profession know that he did many things for humanity without medicine that only a limited number of his graduates can do today. We, as a profession, will go much farther on the road to perfecting our own science if we depend upon our knowledge of disease from the anatomical, structural standpoint.

Why did Dr. Still succeed so well? It was not because he mixed drugs with his osteopathic practice, but because his philosophy of disease was based upon structural integrity. He saw defective structure lying back of abnormal functional expression. He reasoned mechanically about disease rather than chemically. He reasoned thus: if the machine is perfect in its structure, its work, or expression of vital phenomena, will be perfect. And is not this reasoning correct? It is true of the chemical devices. Why not of the human body? If we would follow Dr. Still in his philosophy of disease, we must learn to think in terms of mechanics; must see the machinery of the body at work, as we see the vast mechanical equipment of a factory—levers, wheels and axles, pulleys, planes, screws and wedges—antecedent to vital phenomena. Structure antedated function at all times in the human organism.

Having placed the structural importance of the human body, as related to health, where it belongs, in its primal legal setting, let us turn attention to the second law of life, which is, that change in structure produces change in function.

The second law of life parallels the first law of life so closely, and the two laws are so intimately interwoven and interlocked, that to concede the first law as true is tantamount to granting the truth of the second law. If we grant that the structure of the watch determines its function, and is of prime importance to its time-keeping service, then we have already conceded that a change in the structure of the watch will be cause for change in its time-keeping action. If we strike the watch a blow sufficient to wreck its structure, then we are prepared to see its time-keeping service destroyed; change in structure produces change in function.

A storm of rain, sleet and high wind passes through a community and wrecks the telephone system in that community. The telephone poles are blown down and the wires are snapped. Will the service of the telephone system be impaired by this change in its structure? Will it function normally without repair of its structure? What has changed its function from normal service to greatly impaired or no service at all but change in its physical structure by the storm? Change in structure produces change in function.

The nervous system has many modalities for vital expression—sensory, motor, secretory, trophic, vasomotor, visceromotor, cerebromotor, etc., all of which are used to express and control the vital phenomena of the organism. When the different modalities of the nervous system are disturbed a disorganization of functioning of organic parts ensues which we call symptomatology—abnormal expressions of vital phenomena. The lesions (structural changes) have so altered the executive control of the nervous system that normal functional reactions of organic life are no longer possible, the expressions of vital phenomena are unnatural and perverted. Change in structure produces change in function.

A defective articulation in a certain part of the dorsal spine may so irritate and modify the nervous system in its control of circulation to the peptic and hydrochloric glands of the stomach; in its control of peristaltic movements, or tonicity of muscles of the stomach; in its trophic influence upon the walls of the stomach, as to change the normal digestive functions of the stomach into radically disordered reactions. These reactions may take the form of excessive gas formation, owing to the fact that the hydrochloric acid forming glands of the stomach do not secrete enough hydrochloric acid to keep down food fermentation as they are intended to do; they may manifest slow peristaltic action with retarded emptying of the stomach walls; or they may show defects in the trophic innervation of the stomach walls, thus forming ulcers.

When sensory, motor, vasomotor, secretory and trophic nerve impulses to the stomach are modified and perverted by the vertebral lesion, one could not expect normal functioning of the stomach, but, on the contrary, an acute or chronic gastritis or other gastric abnormalities in function. Change in structure produces change in function.

Biologic laws of life are basic, logical, and scientific. Basic because there is no conflict between reason and the working of these laws; and scientific because the application of these laws will produce the same results over, and over, and over again, as often as one wishes to repeat the experiment.

It is true that lesions along the spine produce different symptomatologies from different areas of the spine. We may have gastritis from the mid-dorsal lesion of the spine; nephritis from the dorso-lumbar lesion; cystitis from the lumbosacral lesion.

The lesion may not produce a vasomotor disturbance, but a muscular reaction in which a spastic condition of muscles is created, as muscular cramps in the legs, constipation, asthmatic spasms, hiccough; or the muscles may relax excessively and produce pendulous abdomen, sagging colon, prolapsed uterus, or baggy hemorrhoids.

The lesion may disturb the secretory nerves to secreting glands of the body, producing derangement of chemical metabolism, thus modifying nutrition, arresting excretion and creating auto-intoxication.

The symptomatology arising from the osteopathic lesion varies radically and extensively, and such wide variation in reaction is quite in keeping with the foregoing biologic laws first stated. The cellular differentiation of each organic part of the body supports the biologic law of plant and animal life, that structure determines function, when these structurally differing organs produce different physiological as well as different symptomatic reactions, to stimulation of their several nerve trunks. The reacting modalities of the nervous system differ because the peripheral end of the nervous system is connected with organic parts differing from each other in cellular integration—the cellular structure of each organic part of the body is differentiated according to its function. Structural law is here seen in applied form as a working principle of the organism. The cellular structure of the lungs, heart, stomach, kidney, bowels, etc., is differentiated in form in order to insure different reactions or functional expressions of vital phenomena. The modalities of the nervous system differ in order to insure specific functional reactions in liver, lungs, heart, kidneys, etc. Lesions produce different reactions or symptomatologies in the organism because the structural composition of organs differ.

Normalization of structure produces normalization of function. This is the third law of life, and it is as intimately related and interwoven with the first and second laws of life as the second is with the first.

When we think of the second law of life—change in structure produces change in function—we have in mind a change in function from normal to abnormal. The mind is centered at once on finding disease symptoms instead of normal physiological reactions of the organism. We anticipate adverse reactions in the organism from change in its structure. But a more careful investigation of this law reveals the fact that the change wrought in functional reaction by change in structure is not always detrimental, but on the contrary may be quite the reverse, depending upon what kind of change is made in structure.

If the change in anatomical structure is made in the organism from normal to abnormal, then change in function will be from normal to abnormal; but if change in structure is from abnormal to normal, then change in function will be from abnormal to normal. Change in structure may be made to react upon the organism either favorably or unfavorably. Perfection of structural adjustment carries with it perfection of functional reaction. If the machine is perfect, its service, or functional reaction, cannot be other than perfect. If the anatomical structure of the body is normalized, perfected, then, and then only, can we reasonably expect perfect functional expression of vital phenomena. The blow which wrecks the structure of the watch will also destroy its time-keeping function; but the change in structure which the watch undergoes in repair while in the hands of the jeweler will also restore the time-keeping function of the watch. Change in structure is productive of dual reactions—one effect being destructive, the other constructive. Change in structure, which is from abnormal to normal, is constructive in its influence upon function. Normalization of structure produces normalization of function in the organism. This is the great basic principle of osteopathic therapeutics.

Lesions, anatomical imperfections, of pelvis, spinal column, ribs, muscles, ligaments, cartilages, etc., which interfere with the nerve supply to organic parts of the body cause modification, perversion and suppression of organic functions which are called disease. Removal of these structural imperfections of the body is basic to restoration of perfect functional expression of vital phenomena. Therefore, normalization of structure is a basic therapeutic law which must be applied in order to create a natural change in functional reaction from abnormal to normal in the human body.

What a striking manifestation of this basic law of normalization of structure to produce perfect functional reaction is found in the circulation of the blood in injuries! No sooner has the injury occurred than this law begins to become active in making repair of structure in the injured area. The circulation brings serum, fibrin, red and white blood cells, etc., to the injured area in abundance, preparatory to making structural repair, and by this process of structural change the normal functional action of organic parts is restored. And please note that the restoration of normal functional action of each organic part or structure injured is in direct proportion to the completeness of structural repair. Normalization of structure produces normalization of function.

Consider the structural changes which are made in the body in a bone fracture: Immediate increases of the blood to the fracture area, bringing serum, fibrin, blood platelets, red and white blood cells, etc., which are poured over in abundance to the area injured; then coagulation of blood, forming a clot of gelatinous substance and plastic adhesions; after a time this mass hardens into gristle substance, or cartilage; and finally the infiltration of calcium salts takes place replacing the soft cartilaginous cell with the new hardened bone-cell. What an array of structural changes take place in this making new of the fractured bone! The broken leg or arm, painful and useless in its abnormal structural state, has been restored to normal functional action again by repair of its structure from abnormal to normal. Normalization of structure produces normalization of function.

No one would expect the broken arm or leg to be useful and function properly so long as it remained fractured — structurally imperfect — but would anticipate useful functioning again when the structure was restored.

Why cannot we project this same idea of structural integrity for functional perfection into our

philosophy of all diseases? Why not realize the body restored structurally, physically, anatomically before we begin to anticipate healthy vital phenomena? Do not digestion, respiration, secretion, excretion, cerebration, reproduction and all vital phenomena of the organism require a physical mechanism through which to give expression to these vital phenomena? Why is this philosophy of vital phenomena of the living organism so incomprehensible to the professional world? Or is it a question of unwilling comprehension? Are some nihilists from choice? Let each individual answer that question himself.

The laws of life are simple and easily understood if we are willing to accept the basic fundamental laws of life as they are written in a common-sense language all around us. Most of us are not close observers of the common laws of life. We do not think about what we see and hear and feel with a comprehensive, philosophical, analytical mind. We should all do this—even laymen. But what shall be said of the professional man who is negligent of mental action which looks toward evaluation of natural vital phenomena spread before his eyes every day of his life?

Dr. Still could tell whether the hop vine and morning-glory vine grew around the stalk of corn or fence posts in the same direction. Can you tell which grows to the right, and which to the left—or whether they grow in the same direction?

"Open thou mine eyes that I may behold wondrous things out of thy law."

1003 Odd Fellow Bldg.

Bony Lesion Adjustment vs. Soft Tissue Work as a Means of Normalizing Body Function

FRANK HUNTER SMITH, D.O.
Indianapolis

First, we would define a bony lesion as any faulty alignment of adjacent articular surfaces, or any fixation or limitation of the normal joint movement.

This limitation of articular movement or fixation may result from trauma, exposure or reflex irritation at some distant point.

If the bony lesion is the result of trauma, there is often faulty alignment of the articular surfaces as well as limitation of movement from the resultant edema and thickening of the ligamentous and muscular attachments around the joint. Usually, when the result of trauma, the articulation has been carried to the extreme limit of normal motion and locked in that position. For correcting a lesion of this type, it seems to me that the logical adjustment is an attempt to break up this fixation by a leverage which, by quick application of force, will first of all *move* the articular surfaces. If the joint is fixed at the extreme limit of motion, it should be carried back over the plane of normal movement and the normal range of movement reestablished. But first the joint should have quick force applied to it to break up the fixation. Then soft tissue work follows to normalize the joint movement.

If we depend on soft tissue adjustment to restore the joint, the fixation is either not broken down, or, if accomplished, it takes a longer period of time to accomplish what could be done better and quicker by following the plan just outlined.

This same argument will hold when the bony lesion is the result of exposure or from reflex irritation (including pus from focal infection); for if the lesion is sufficiently rigid to alter function in the organs innervated from the corresponding spinal segment, restoring normal movement of the articulations will result in a much quicker reaction in the corresponding spinal segment and consequently in the organ or organs supplied from this area than attempting to restore normal movement by relaxation of the soft tissues, even though the soft tissue lesion be primary, as in the case of exposure to temperature changes or infection.

Naturally the faulty posture, exposure to cold or infection (including focal infection) will have to be reckoned with if we wish to prevent a return of the lesion in cases other than those which have a history of trauma.

Normal bodily function follows the bony lesion adjustment as naturally as abnormal function follows the production of a lesion, provided the organ involved has not undergone permanent changes or pathology. Whether the changes in the spinal segment involved in the bony lesion are the results of circulatory changes, including local acidosis, or a disturbed nervous reflex, we leave it to our Research Institute to determine.

One thing is certain; if we wish to influence body function quickly, we must first break up the fixation of the lesioned articulation as a preliminary measure toward restoring normal movement of the joint. To do soft tissue work *without* definite bony movement is far from doing the best for your patient that is possible.

527 Merchants Bank Bldg.

A Formula Governing the Application of Force in Tissue Adjustment

JOHN A. MACDONALD, D.O.
Boston

"In the ever widening horizon of truth and knowledge it is dangerous to stand still." It may be dangerous to stand still but it may not be dangerous to go back—to go back to see if there is not some fundamental law, formula or device recognized by all scientists, which will give us a lead or a guide for actual osteopathic practice in the department in which we are supposed to be expert; namely, adjustment of body tissue.

It goes without saying that an osteopathic physician should be as good at diagnosis as his ability will allow; that he should consider the effects of visceral and other reflexes, focal infection and functional abuse in the making and establishing of lesions.

Every worthy osteopath, after some experience, wishes to better himself in expert quality. If he is any good he is dissatisfied.

In this effort to be expert some work hard on standard physical diagnosis and specialize on certain standard practices in modern medicine; others on such items as colonic therapy, hydrotherapy, diet, etc.

Others become susceptible to new proposals and procedures not recognized but plausible, and which may or may not stand the test of time.

As to the methods of observation we appropriate from the so-called standard school; they are authoritative and, for the moment, accepted by authority when they appear in text or in research reports, and for the present we need not worry about any necessity on our part for severe scrutiny of their methods or accuracy.

Our business lies in the direction of the special thing we do and at which we are supposed to be expert; namely, *again, adjustment of body tissue.*

We need to go right to the raw osteopathic question and stay at it, giving the best consideration possible to standard methods of observation.

We need expert quality in our osteopathic work more than we need modern standard observations, be the latter need great or ordinary.

We have geniuses in osteopathic technic scattered throughout the profession, but they are Individualists, and Individualists are too difficult to follow for the steady development of the rank and file.

Every graduate is supposed to know his academics and, most of all, his osteopathic mechanics. His great variation in ability comes in his technic—and yet it is known that the tyro often cures when the expert technician fails.

But, whatever our difficulties are, every osteopath worthy of the name would like to have a little more assurance that his osteopathic work contains a scientific quality which should give him more chance to apply his treatment with intelligence; to feel more as an expert feels—an expert who looks at the job, sees certain signs to guide him and, by these signs, decides what he wants to do before he does it; to feel like an expert who does not do the same thing every time; that he is pace-changer and that he knows why he changes his pace.

The following bromides will illuminate our problem. Bromides are born of endless repetition, and every one will recognize the authentic character of them.

"Doctor, do anything you like, but don't crack my neck."

"When I was in Blank I went to Dr. X. a few times. I didn't like him. He's a fine man personally, but he treated me only ten minutes. At home our doctor always treated me an hour."

"I don't like N. He's too harsh. XX gives me a nice long, easy treatment."

"Dr. W. has quite a practice but I never feel he is definite in his work. I question if he always knows what he is doing, or why."

"Dr. Q. gives me the impression that he is trying to see how many he can treat—a slapdash routine—with no care for the individual."

"When I first went to Dr. Blank he treated me very hard—with sudden, tremendous force. I had been used to very gentle treatment, and it frightened me, but I felt so much better that I began to see a new idea in osteopathic treatment. It seemed I was not getting treated at all before. After two or three such treatments I was greatly delighted; and then I began to get tender, and did not feel so well. He kept on with the same treatment with the same intervals, and I got worse and worse and had to quit."

There are your bromides illustrating the many differences in operating and, because of these differences, the many different ideas in the public mind.

What is to harmonize the ideas the public have of our osteopathic work? We can't all be equally good technicians. Personality does not count for everything. Criticism is made of the best osteopathic physician, as well as of the worst.

It should come to this: That the concept the doctor has in his own mind of his own expert ability is the great factor. If he is sure of his procedure and definite in his own mind, the patient will not question.

Consciousness of expert quality should be in every doctor's work, whether he is as able as some one else or not. If he is less able something should enable him to contribute his bit with a consciousness of expert quality.

In a word, that a law he knows governs his manner of treatment. That that law shall be an accepted fact in science; that it shall deal with the application of force, which is his great factor in adjustment. That that much shall be stable, since manner and results of adjustment are so variable in different hands.

Conceded the knowledge of an osteopathic graduate and technic varied by physical conditions and technical ability, the force you apply to adjust tissue becomes a factor which should have more consideration than we now give it.

Whether your idea is to apply your adjusting force at right angles to the plane of the articulation, or in the plane, the amount and manner of application of the force should be modified in different instances, and the indications which guide us in those modifications should be part of our equipment from the first day out of school to the last day of practice. We should no longer be left to acquire this knowledge by bitter experience.

It so happens that there is a standard means of observation recognized by all scientists, the formula of which is the guide we need to govern our application of force used in adjustment.

The "Muscle Nerve Preparation," so-called, well known in the first six months of primary physical laboratory, shows the reaction of muscle nerve to the great stimuli, electric, thermal, chemical, traumatic and, in the living organism, mental.

In using force to adjust tissue the division of stimuli with which we are mainly concerned is trauma—a benign trauma, if you will, but trauma none the less.

The laboratory mechanism of the muscle nerve preparation is too well known to describe, but its use for application to our osteopathic adjustment has been without serious consideration until recently.

The formula showing the effects of the sudden and gradual application and release of force is indicated as follows:

FORMULA OF NEUROMUSCULAR REACTION TO STIMULI

Key: Stars represent contraction spasm neuromuscular reaction. Ciphers represent absence of contraction spasm neuromusclar reaction.

Force suddenly applied	* * *
Force suddenly released	* * *
Force suddenly applied	* * *
Force gradually released	0 0
Force gradually applied	0 0 0
Force suddenly released	* *
Force gradually applied	0 0 0
Force gradually released	0 0 0

At this point we are to consider the indications governing the application of force in adjustment.

We are not now considering ossification—advanced fibrous fixation or fixations compensating organic distortions from fracture or repair following necrosis of bony tissue.

We are considering contrac*tion* and contrac*ture*. Contrac*tion* acute—contrac*ture* chronic: both first induced as a protective process, nature's functional fixation to produce rest in an injured or inflamed part.

When the distortion produced by the contraction, and possibly later contracture, becomes the irritant the osteopathic procedure is to reduce the distortion by adjustment.

The osteopathic physician knows what a contraction and a contracture is when he examines.

The contrac*tion* is of an acute nature. The muscle tissue involved is tender, rigid, angry, and, if the process is intense, there is local temperature and pain on attempted motion. It is the muscle tissue state which offers a resistance spasm if any one of the great stimuli is *suddenly* applied or *suddenly* released. It is the muscle tissue state which will offer little or no resistance if any one of the great stimuli is *gradually* applied or *gradually* released.

The contrac*ture* is of a chronic nature. It is a muscle state produced by functional abuse or by repeated acute spasms of contraction—each previous subsidence leaving a certain amount of chronic contracture to which is added the accumulation of contracture produced by recurrence of contraction. When the contracture is advanced and established there is little or no susceptibility to ordinary contraction—reflex or otherwise. The nerve impulse transmission is reduced and function from the affected innervation suffers, *but* there is little or no contraction spasm.

Contracture is the muscle tissue state which doesn't offer a resistance spasm to sudden application or release of any one of the great stimuli. In the contracture state the muscle tissue is more or less rigid, stringy and limited in motion, but not painful on attempted motion, showing no anger or local temperature.

Contraction and the contracture states are easily recognized by the osteopathic physician if he has in his mind the importance of distinguishing the difference between them. The old-timer and some young-timers know. Some by intimation, some by study, but for the most part our knowledge of these states is the result of bitter experience. It should not be; it should be in the mind of everyone who attempts adjustment from the early days of his practice until the last days.

Miracles happen, but they are the exception to the rule and an expert considers them but *does not depend* on them.

Routine treatment or routine style of treatment is likely to reduce expert quality. Change of pace marks the expert.

Observation of the muscle tissue state indicates contraction or contracture.

Sudden application or release of force in contraction produces a more severe after spasm and is contraindicated. Occasionally a miracle happens—the exception to the rule obtains—and a good adjustment is made by suddenly applied force in a contraction area. When this happens it should be the result of the operator taking a chance, knowing he is taking a chance and with the full knowledge of probable failure; a justified chance taken because of the possibility of success—not the probability. If the operator is expert enough to judge the chance and good technician enough to make a perfect attempt, then he is the operator *par excellence*.

This exception is possible as follows: When the release of pressure by the adjustment is greater in effect than the trauma caused by the force used, then relief should follow; and when this is accomplished by an expert who knows the chance he takes—there is your osteopathic operator *par excellence*.

When an operator changes his application of force because it is indicated by tissue changes he is an expert, a pace-changer who knows why he changes his pace.

In contraction (acute) the gradual application and release of corrective force may reduce the acute condition to a state in which all contraction spasm disappears and old contracture remains. At this point an operator should consider whether or not the time has come to apply sudden corrective force for reduction of remaining chronic distortion, taking into consideration, of course, the question of old compensation from any cause. In case the operator decides that sudden application of force must be used to get adjustment, *gradual release* of force may save the situation; and it is reasonable to expect a good result; it is within the law. (See formula.)

In contracture (chronic) the sudden application of force used at intervals of two to four days may secure very gratifying results until the contracture is changed to a contraction by the trauma; then you are ready for a change of pace. The law of muscle nerve reaction should indicate to the operator that he must use gradually applied and released force until the new contraction state subsides, or he may decide to suspend treatment until the spasm subsides—when he may proceed as at first. (See the last bromide.)

In an acute disease with fever and full functional load, an operator of experience will think a great deal before he uses suddenly applied force in treatment. For example, a heavy urine, rapid heart and respiration, every part of the disease process at high speed, stimulation from the trauma of suddenly applied force is contraindicated. Experience has taught the old-timers to say: "The machine is doing all it can, carrying a full functional load. Why risk stimulation? Treat to slow down the process a little. You may de-

cide to risk an attempt to force a greater load; but think about it."

It is difficult to elaborate this simple idea on paper. Some gifted writer should do it. This writer ventures it because during the years he has considered this question and appeared on programs over a hundred young doctors have told him that they felt immensely encouraged by the consideration and use of this formula. They all had academics, good technic and good mechanics, but the consideration of applied force in adjustment through the muscle nerve preparation formula gave them a feeling of expert quality and kept them from being routine operators.

Know your academics.

Know your mechanics.

Be as good a technician as you can.

But know the indications for changing the application of the force you use in adjustment.

The corrective force is the power you use in adjustment. The indication for modifying that power cannot be ignored by an expert.

160 Newberry street.

(End of Symposium)

Diabetes—Its Diagnosis and Treatment

STANLEY G. BANDEEN, M.S., D.O.
Louisville, Kentucky

Article XVII

PROTEIN METABOLISM

Protein Requirement: The proteins are complex chemical substances. They undergo digestion in the stomach and intestines and are absorbed into the blood stream from which they are utilized for construction and reconstruction of parts of the cell protoplasm. The cells of the body are constantly breaking down, hence a supply of protein in the diet is necessary at all times to replace it regardless of the amount of carbohydrate and fat consumed.

Protein metabolism has been extensively studied and the experiments conducted in this respect have left little doubt as to the minimum required and to the maximum that can be used without harmful results but there is a wide divergence of opinion as to the amount which best suits the body's needs.

In direct contrast to carbohydrate and fat which are stored in the body if an excess is used, excess protein is not stored but eliminated. On the other hand a diet which does not contain sufficient protein to keep the body tissues in repair is detrimental to the health of the individual.

Formerly about 120 gm. of protein was used as a standard—based on the work of Voit who found that the average sized man at moderate work used 118 gm. of protein, 56 gm. of fat, and 500 gm. of carbohydrate.

Today this standard is regarded as much too liberal for the majority of persons and useful only in certain wasting diseases as tuberculosis, during convalescence from acute illness in which the body tissues need rapid repair, in pregnancy and in lactation.

Langworthy's experiments with the food habits of people of various occupations in our own and in foreign countries have led him to state that for individuals of moderate activity 100 gm. of protein and 3000 calories are usually consumed daily.

Voit's experiments were conducted on laboring men in Germany who were eating their usual diet and not one specified for experimental purposes. This gives us no information on the ideal amount of protein or calories.

The same is true of the investigations of Langworthy who studied the diets of individuals as planned by the individuals themselves.

Chittenden, however, conducted his experiments along entirely scientific lines. He fed groups of persons specified diets containing known quantities of protein and very carefully studied the effects of the various quantities of protein on the individuals by use of the nitrogen equilibrium. He also experimented with his own diet in this respect. At one time he lived for nine months on a diet containing 34 gms. of protein while a co-worker, Mendel, lived for seven months on a diet with 41 gms. Chittenden's weight was 57 kilograms and Mendel's 70 kilograms. As a result of these various experiments Chittenden assures us that a low protein diet can be safely used for long periods of time and that 60 gms. (one-half the old protein standard) of protein with 2800 calories are sufficient to meet all of the real physiological needs of the body of a business or professional man of average size (70 kilograms, 154 pounds) and that even smaller amounts are sufficient for one leading a very sedentary life. This low protein standard of Chittenden is generally accepted at the present time to be near the ideal for healthy individuals. If an amount of protein in excess of the needs of the body is eaten, it must be oxidized and a long list of end products such as urea, uric acid, creatin, creatinin, etc., result, all of which are more or less toxic if present in large enough quantity.

If a liberal suply of carbohydrate, sufficient to cover the heat requirement of the body, is allowed, total deprivation of protein causes a very low output of nitrogen with a low but constant elimination of urea, creatinin, and purin bases. The total nitrogen usually falls to about 3 gms. of which about 55 to 60 per cent is urea and 17 to 20 per cent is creatinin. The ammonia excretion is also low because there is no acidosis. Should the carbohydrate intake fall below the caloric needs of the body, an immediate rise in ammonia nitrogen is experienced, due to the utilization of body protein in an effort to make up for this caloric insufficiency. Protein is not, however, an economical source of energy and should not be used for this purpose.

Protein Tolerance in the Diabetic Diet: The quantity of protein required by diabetic patients varies with age, weight and activity of the person as well as with the condition of the kidneys. Protein stimulates the metabolism more than any other food, favors acidosis so a quantity above that required by the body for actual reconstruction is even more detrimental to diabetics than to healthy individuals.

Joslin states that it is a safe rule to increase the protein gradually up to the same quantity as that required by normal persons or approximately 1 to 1.5 gm. per kilogram body weight for adults. The

following rule is given as his method of increasing the protein tolerance to this amount. When the urine has been sugar free for two days, add twenty grams protein (three eggs) and thereafter fifteen grams daily in the form of lean meat, fish, and eggs until the patient is receiving 1 gm. protein per kilogram body weight.

Our method of arriving at the protein tolerance varies somewhat from this method and is not quite as rapid as Joslin's. It is as follows:

When the urine has been sugar free for three days, add ten grams of protein in the form of vegetable protein and eggs and thereafter add on an average of six grams daily in the form of vegetable protein and eggs until the fourth day when bacon can be used and on the sixth day lean meat. This is continued until ¾ gm. of protein is given per kilogram body weight, or if the carbohydrate tolerance is very low or nearly zero, to 0.6 gm. per kilogram body weight. Later, if desired, the protein may be raised to 1 gm. per kilogram body weight. In the diet of severe diabetics, the protein must be restricted to less than 1 gm. per kilogram body weight in order to increase the carbohydrate and particularly fat without the danger of acidosis.

Protein can lead to the formation of 58 gms. of glucose for every 100 gms. of protein metabolized. It has been claimed that vegetable protein gives rise to less carbohydrate than do animal proteins. As a matter of fact it makes no difference which is used as far as this is concerned. There are, however, several reasons why I use the protein from vegetables and eggs to build up the protein tolerance instead of using that from meat. Briefly they are as follows:

The vegetables furnish valuable minerals and vitamines (especially when used in the raw state) extremely necessary to the diabetic; they furnish greater bulk to the diet; they tend to eliminate constipation which is almost always present, while meats favor it; they aid in the establishment of a desirable intestinal flora, while meat has the opposite effect, and they are in most cases more easily cared for by the digestive tract.

In some forms of nervous and glandular glycosuria, intolerance for protein is even more marked than inability to metabolize carbohydrate, so much so that in severe cases fasting may increase the hyperglycemia and glycosuria instead of diminishing them. An addition of carbohydrate to the diet will then bring about improvement, provided that the protein and fat are kept at a low level.

Protein Requirement for Children: The diet of a child from two up requires very few changes from the diet of an adult. Due to the rapid growth, the amount of protein required per kilogram body weight is necessarily greater than that of an adult. A normal child of four should receive 3 gms. per kilogram body weight while in the case of a diabetic child 1.5 to 2.5 gms. is all that can usually be tolerated.

Provided there is no loss in weight, a suppression of growth for a short time should not cause any anxiety as growth will later proceed at an increased rate causing the normal size to be reached by the time the period of growth is ended.

Fat Requirement: The diet of a normal individual varies greatly in its fat content. After deducting the protein from the total calories of the diet, the remainder is composed of fat and carbohydrate. The exact proportion is a matter of individual choice and varies according to the likes and dislikes of the person and often with the season of the year. In comparison with carbohydrate, fat is an expensive food and is therefore limited in many diets on this account. For an average sized individual (70 kilograms, 154 pounds) doing moderate physical work, 100 gms. of fat is an average allowance.

Voit's standard was 56 gms. of fat and 500 gms. of carbohydrate but the higher fat standard furnishes a diet more in keeping with the findings of present day investigators.

Fat Tolerance in the Diabetic Diet: During normal digestion of fats, they are oxidized to carbon dioxid and water. Carbohydrate, which in a normal diet amounts to from 350 to 400 gms., plays a very important part in this process. In the treatment of diabetes the carbohydrate is limited to a great extent which at the same time lowers the capacity of the body to care for fat. In an effort to compensate for the loss of calories by the withdrawing of the large amount of the carbohydrate, the fat is often increased beyond the capacity of the body to completely oxidize. This incomplete oxidation of fats gives rise to a state of acidosis with the elimination in the urine of acetone bodies—oxybutyric acid, acetone, and diacetic acid. While fat is very important in the diet of the diabetic, it is necessary that only such amount as can be cared for by the patient should be given.

The amount of fat that can be tolerated by a given individual is determined as follows: gradually reduce the fat in the diet to nearly zero, taking not more than five days to do this. After the urine has been free from diacetic acid and acetone for two days, gradually add about eight grams of fat daily until the ratio of fat to carbohydrate is one to one or slightly above.

We have had some cases in which the diacetic acid was not due to an incomplete oxidation of the fat but to a digestive disturbance. If such is the case, it is not wise to withhold the fat until the urine is free from ketone bodies. Such cases are more prevalent in children than in adults.

In all cases from practical experience we consider it wise never to let the proportion of fat to carbohydrate exceed three to two, and in some cases it is best that the ratio should be even less. In some cases only a very small addition of fat to the diet will produce ketonuria, often one egg added to a vegetable diet is sufficient. However, if a larger amount of carbohydrate—15 to 20 gms. for example, is tolerated, the addition of so small an amount of fat has no detrimental effect. *It is essential to estimate the ketone bodies in the urine daily in order to obtain a correctly balanced diet.*

The harmful effects of an excessive amount of fat in the diet are not limited, however, to the incompletely oxidized fat but to a great extent influence the tolerance for carbohydrate. In pancreatic cases there is very apt to occur a distinct lowering of the carbohydrate tolerance with hyperglycemia and glycosuria following in many instances. Other

forms of glycosuria seem better able to use a large proportion of fat without serious results. One of the most striking examples of the effect of even a small amount of fat upon the carbohydrate tolerance we have seen occurred in a child of four whose glycosuria depends on an insufficiency of the internal secretion of the pancreas. When he was first seen in August, 1928, he passed 40 grams of sugar on an intake of 12 grams of carbohydrate. As the result of specific treatment he is now, November, 1928, taking 41 grams of carbohydrate daily without glycosuria.

Observations on other patients have shown similar results so in the event of decreasing carbohydrate tolerance of any of our patients the fat content of the diet is the first thing considered in an effort to relieve this condition, and very often the trouble is in the use of an excessive amount of fat. Individuals planning their diets in their own homes are very apt to unconsciously increase the amount of fat used in the process of cooking and at other times they knowingly add to the fat allowed in the hopes that it will give them more strength or perhaps a gain in weight.

Without access to the extensive analysis of our edible foods, it would be impossible to correctly or safely feed a diabetic. The analyses given in Table XV are of some of the common protein and fat foods.

Taken from the Connecticut Agricultural Experiment Station, Bulletin 286, 1926. A large amount of the classic work of Atwater and Bryant was used in this bulletin. Many analyses have also been taken from Sherman's "Chemistry of Food and Nutrition," Third Edition, 1928.

TABLE XV

Analysis of Protein and Fat Foods
(Analyses are of edible portion unless otherwise stated)

	Protein	Fat	Carbohydrate
	%	%	%
Meat and Meat Products			
Beef, fresh:			
Brisket, medium	15.8	28.5	
Chuck rib	19	13.4	
Flank	19.6	21.1	
Loin	19	19.1	
Neck	20.7	12.7	
Ribs	17.8	24.6	
Round	20.9	10.6	
Rump, lean	20.9	13.7	
Shank, fore	21.4	8.1	
Shank, hind	21.7	8.7	
Shoulder and clod	20	16.3	
Soup stock	5.8	1.5	
Miscellaneous cuts, free from visible fat	22.4	2.9	
Beef organs, fresh:			
Brain	8.8	9.3	
Heart	16	20.4	
Kidney, as purchased	13.7	1.9	0.4
Liver, as purchased	20.2	3.1	2.5[1]
Sweetbreads	16.8	12.1	
Tongue	18.9	9.2	
Beef, cooked:			
Roast	22.3	28.6	
Steak, round, fat partly removed	27.6	7.7	
sirloin	23.9	10.2	
tenderloin	23.5	20.4	
Veal, fresh:			
Breast	20.3	11	
Chuck	19.7	5.8	
Flank, as purchased	20.1	12.7	
Leg	20.7	6.7	
Leg cutlets	20.3	7.7	
Loin	19.9	10	
Rib	20.2	9.4	
Rump	19.8	16.2	
Shoulder	20.7	4.6	
Veal organs, fresh:			
Heart, as purchased	16.8	9.6	
Kidney, as purchased	16.9	6.4	
Liver, as purchased	19	5.3	
Mutton, fresh:			
Chuck	14.6	36.8	
Leg, hind, medium fat	18.5	18	
Loin	16	33.1	
Shoulder, medium fat	17.7	19.9	
Mutton organs, fresh:			
Heart, as purchased	16.9	12.6	
Kidney, as purchased	16.5	3.2	
Liver, as purchased	23.1	9	5[1]
Mutton, cooked:			
Leg roast	25	22.6	
Lamb, fresh:			
Breast	19.1	23.6	
Leg, hind, medium fat	19.2	16.5	
Loin	18.7	28.3	
Shoulder	18.1	29.7	
Lamb, cooked:			
Chops, broiled	21.7	29.9	
Leg, roast	19.7	12.7	
Pork, fresh:			
Ham, lean	25	14.4	
Ham, medium fat	15.3	28.9	
Head cheese	19.5	33.8	
Loin chops, lean	20.3	19	
Loin chops, medium fat	16.6	30.1	
Shoulder	13.3	34.2	
Side, fat	9.4	61.7	
Side, lean	9.1	55.3	
Pork organs, fresh:			
Brains, as purchased	11.7	10.3	
Heart, as purchased	17.1	6.3	
Kidney, as purchased	15.5	4.8	
Liver, as purchased	21.3	4.5	1.4[1]
Poultry, fresh:			
Chicken, broilers	21.5	2.5	
Chicken heart, as purchased	20.7	5.5	
Chicken gizzard, as purchased	24.7	1.4	
Chicken liver, as purchased	22.4	4.2	2.4[1]
Fowls	19.3	16.3	
Goose	16.3	36.2	
Goose liver, as purchased	16.6	15.9	3.7[1]
Turkey	21.1	22.9	
Fish			
Fish, fresh:			
Bass, black	20.6	11.7	
Butterfish	18	11	
Cod	16.7	0.3	
Haddock	17.2	0.3	
Halibut	18.6	5.2	
Herring	19.5	7.1	
Mackerel	18.7	7.1	
Salmon	22	12.8	
Trout, brook	19.2	2.1	
Trout, lake	17.8	10.3	
Whitefish	22.9	6.5	
Fish, canned:			
Salmon	21.8	12.1	
Sardines	23	19.7	
Tuna, canned in oil	23.8	20	0.6
Shellfish, fresh:			
Clams, long	8.6	1	2.1[1]
Lobster	16.4	1.8	0.4[1]
Oysters	6.2	1.2	3.7[1]
Turtle, green	19.8	0.5	
Amphibia			
Frog legs	15.5	0.2	
Eggs			
Eggs, fresh (exclusive of shell):			
Hen, whole egg	13.4	10.5	
white	12.3	0.2	
yolk	15.7	33.3	
Dairy Products			
Milk and Milk Products:			
Milk, whole	3.3	4	4.8

[1]Largely, or in part glycogen.

	Protein	Fat	Carbohydrate
Buttermilk	3.6	0.5	4.1
Cream, heavy 40%	2.1	41	1.5
Cream, light 20%	2.8	22	2.7
Cheese:			
American, pale	29.8	35.9	0.3
red	29.6	38.3	
Camembert	21	21.7	
Cheddar	26.4	32.7	3
Cottage	20.9	1	4.3
Edam	24.1	30.3	4.6
Full cream	25.4	30.3	2
Neufchatel	18.7	27.4	1.5
Roquefort	22.6	29.5	1.8
Swiss	27.6	34.9	1.3
Ice cream, typical	3.8	12.6	19.6
Fats and Oils			
Butter, etc.:			
Butter, average	1.5	84.6	
Oleomargarine, average	0.8	92.4	
Vegetable oil margarine (nut margarine), average	1.4	84.8	
Salad oils and cooking fat (olive, Wesson, Mazola, lard, cottolene, Crisco, etc.), typical	0.2	99.7	
Miscellaneous			
Gelatin	84.2	0.1	
Protose	22.5	9.6	11.2[2]
Nuts			
Nuts:			
Almonds	21	54.9	15.3
Brazil	16.8	69.4	5
Chestnuts	6.2	5.4	40.3
Cocoanut	5.7	50.6	27.9[2]
Hickory	15.4	67.4	11.4[2]
Peanuts	25.8	38.6	21.9
Peanut butter	29.3	46.5	17.1[2]
Pecans	9.6	70.5	15.3[2]
Walnuts, California or English	18.4	64.4	11.6
black	27.6	56.3	11.7[2]

[2]Includes 2.3% crude fiber.
[2]Includes fiber.

The New Non-Surgical Treatment of Phlebectasis Varix and Sequelae

WALTER HARRY GILLMORE, D.O.
Minneapolis, Minn.

GENERAL DISCUSSION

Prior to the advent of the treatment to be outlined in this paper, only two methods of treatment for varicosities of the lower extremities have been practiced—that termed palliative and that termed operative.

Without recounting the advantage or disadvantages of either of these methods, let it suffice to say that neither have been very gratifying to either patient or physician. It is to be assumed on this premise that the osteopathic profession especially would welcome this resume of research work carried on under the title I have chosen for this paper.

First, let it be stated that I disclaim originality in so far as the method is concerned, credit being given in that regard. However, I feel that my osteopathic training may have added a bit to the technic, and as far as I know, I am the first of our profession to have used this method extensively, at least in this country, having administered to date more than 10,000 treatments* over a period of four years.

*"Treatment" as used here, designates a single intravaricose injection.

It has been at a great deal of expense, personally borne, that translations have been made of various texts, in addition to time spent in research work and clinics.

I wish to acknowledge the kindly help given me by many members of our profession. In particular am I grateful to Dr. S. M. Moulton, M.D. for his kindly advice and help, to Dr. Leslie S. Keyes, D.O. for his constructive criticism, Dr. J. O. Humbert, D.O. and F. Deeds, Ph.C. for laboratory assistance, all of which was unstintingly given without any possible profit individually.

There may be highly efficient osteopathic treatment for the relief of this condition. If so, perchance this paper will bring forth valuable suggestions which I should certainly welcome. Nevertheless, I am inclined to believe that many have had experiences with cases of varicose veins and ulcers that have made them feel, as I have felt, indeed helpless.

I know of no other such outstanding or self-evident affliction which inspires more desire to help. A majority of the victims afflicted occupy such a position in the social scale that it is necessary to carry on in spite of their handicap. You will, I believe, find no class of people who show more gratitude for relief than these poor wretched folk. It will not be difficult for you to realize this, if you will bring to mind some poor patient of your own perhaps the mother of a large family, bravely struggling on, patiently bearing the torture of an ugly ulcer of perhaps fifteen to twenty years standing. One surely cannot carry the distinction of being a physician very proudly if he does not have a desire to reach out and help such sufferers.

Incidentally one might mention that the feminine sex who are most eager to be in style, wearing short skirts and sheer silk stockings, are at a loss to know what to do about the unsightly veins revealed. The consequence of this, and perhaps the fact that many more women are working outside the home where long continued standing is required, as in stores and offices, probably accounts for the fact that doctors have been appealed to more than ever before, to treat and give relief from these troublesome conditions.

The new non-surgical treatment of varicosities has met with such remarkable success that it has been received enthusiastically in this country as well as abroad, although it was originated by eminent European men of scientific medicine, in England, France, and Germany.

The purpose of this article is not to give a universal panacea for all varicosities, as the new treatment has its indications as well as its contra-indications, but to show how the application of this new process is easy; how inoffensive it is when properly applied under the rules of good technic and extreme care.

In well handled cases, this method gives conspicuous results as shown in the clinical experiences since 1916 of Prof. Sicard, physician of Necker Hospital, and Dr. Gaugier, his collaborator. They have treated several thousand cases, some of which are of more than fifteen years standing.

The indurating treatment of sclerosing solutions for varicosities, has been developed successfully in recent years, although the idea itself was

used as early as 1853, but with very little satisfaction, mostly because of the type of solutions used, and lack of asepsis. To more fully appreciate the sedulity with which this work was carried on by Europeans, long before it reached this country, one should read the writings of Sicard and Gaugier as noted in the bibliography attached to this article. The following outline, however, will undoubtedly be interesting.

HISTORICAL ACCOUNTS

Since the advent of the hypodermic syringe for injection, several physicians have tried to treat varicose veins by challenging directly the veins pathologically distended, but one by one the efforts were abandoned after a few experiments. Some accidents were observed due to the lack of asepsis as well as those due to the effect of the caustic qualities or toxicity of substances used.

In 1853 Chassaignac, Pravaz, and the Lyon school experimented with the use of perchlorid of iron. Two or three drops of a 30% Baume solution were injected into the varicose veins which soon showed signs of inflammation and then were transformed into fibrous cords. Weinheimer treated thirty-two cases, making as many as nine injections at one time. He obtained thirty cures, or improvements, but unfortunately some of his cases developed partial gangrene and phlegmon by the defective technic and so this method was abandoned.

In 1875 Vallette of Lyon gave a new impetus to this method of treatment by replacing the perchlorid of iron with iodotannin liquor, claiming it to be less toxic in having two peculiar and desirable qualities, that of iodine being antiseptic and the tannin coagulative.

An elastic bandage was tied above the knee and the patient allowed to walk about to distend the vein when ten to fifteen drops of the iodotannin liquor prepared by Guillermond were injected. A rest in bed from seven to eight days was necessary, according to Vallette, who obtained perfect results in this manner without any important occurrence to relate.

In 1881 Legendre modified the Vallette method by simplifying it.

In the medical congress at Lyons in 1894 it was agreed to discontinue all these local processes of treating varicose veins. Only a few foreign surgeons were carrying on the direct injection method.

In 1904 Carel de Berne injected a few drops of 5% carbolic solution, but this was preceded by a minor operation imposing a venous ligature above.

Professor H. Rodger of Marseilles in 1920 made a study in behalf of the medical committee of the Bouches-du-Rhone of these different manners of treatment of varicosities by the local injection.

Schiassi obtained favorable results in sixty serious cases and observed no local or general complications. After a week the varicose veins were transformed into hard fibrous substances and complications such as varicose eczema and ulcer were lessened.

Here, however, we have in question some mixed medico-surgical methods and the local injections of such substances as perchlorid of iron, alcohol, iodotannin solution and carbolic acid, which were successively discontinued.

It was then time for someone to develop a practical, simple and safe method of treating varicose veins by the intravenous injection. It was during the war when Professor Sicard was chief neurologist of the fifteenth division that he observed in syphilitic cases certain hypersodic products such as luargol caused an obliteration of the veins under treatment. The veins became indurated and disappeared without edema. This observation prompted him to apply sodic injection in the treatment of varicose veins of the limb. All varicose veins thus treated were completely cured without showing symptoms which might indicate a development of phlebitis.

The first experiences with the solution of sodium carbonate were wholly successful; unfortunately, however, this sodium salt—wonderfully acceptable from the general point of view, proved to be an energetic escharotic of the subcutaneous tissue. At this time it was suggested to replace the sodium carbonate by that of sodium salicylate.

Sodium salicylate produces to a sufficient extent the indurating action upon the venous (endothelium) in the same manner as the sodium carbonate solution, but with the advantage of being more easily supported by the subcutaneous tissue. Furthermore, every one is aware that the sodium salicylate may be injected in large quantities into the blood stream without undue reaction and also with the appreciable advantage to those suffering with arthritis and allied conditions. During the actual practice these eminent gentlemen, Drs. Sicard and Gaugier, found a general use for the sodium salicylate and with this product they treated almost exclusively the patients of Necker Hospital and early in their experience made about 15,000 punctures without serious complications of any kind. Their patients attended to their customary occupations. The method of the indurating injection with the sodium salicylate is essentially ambulatory. They reported positively no offense when the following essential factors were cared for:

1. To inject only such varicose veins able to be benefited by the method, after a full examination of the patient.
2. To be extremely careful that the indurating product or substance is not outside of the vein.

After these interesting researches other authors made known the indurating effects of other chemicals and substances. Montpellier and Lacroix of Alger used mercury biniodide (*Presse medicale* 1922).

The great surgeon Genevrier the same year in the *Mondi Medical* (Medical World) attracted attention to the peculiar indurating qualities of quinine.

J. Traisier made a study of the results obtained with sodium citrate and noted the indurating properties of this chemical. Later the German and Swiss physicians successfully used bichloride of mercury and sodium chloride (hypertonic solution).

Dr. Orel Martin, surgeon of the Massachusetts Osteopathic Hospital, calls to my attention the fact that boiling water has also been used for intravaricose injection.

All of these indurating substances act about the same as does sodium salicylate and the manner of using them is likewise similar.

ANATOMY

The leg is drained by a system of surface veins and a deep system of veins, which accompany the great arteries. The veins are supplied with bicuspid valves so set as to allow the blood to flow only toward the heart. A number of short vessels pass from the larger vessels of the calf to the deep veins as a sort of safety vent. These vessels perforate the muscle fascia to reach the deep veins and are equipped with valves permitting the blood to flow only from the surface to the deep veins.

The course of the internal saphenous is in front of the tip of the inner malleolus, over the subcutaneous surface of the lower end of the tibia, and then along the internal border of this bone to the back part of the internal condyle of the femur, whence it follows the course of the sartorius muscle, to empty into the femoral vein at the saphenous opening. The internal saphenous vein drains

the inner side and front of the calf. The external saphenous lies behind the external malleolus, and from this follows the mid line of the calf to just below the ham, to join with the popliteal vein. It drains the back and outer side of the calf. Both these veins in the leg are accompanied by nerves, the internal saphenous being joined by its companion nerve just below the level of the knee-joint. No doubt much of the pain of varicose veins in the leg is due to this fact.

The deep veins care for the active muscles of the leg, and carry a considerably larger volume of blood than those of the sub-cutaneous tissue. So, as a result, when the superficial veins are disabled, they are capable of disposing of the surface blood.

PHYSIOLOGY

Physiologically the means by which the blood is carried from the legs to the heart is particularly interesting. Mechanical factors appear to be of greater value in this than the influence of innervation and vasomotor control. There is, of course, both a slow push onward from the capillary circulation and an upward suction transmitted through the great abdominal vessels by the rhythmic pumping of the breathing and the heart action itself. However, the chief force lies in the action of the muscles of the legs upon the vein wall.

The vein is divided into a series of chambers by the valves. These valves are so set that the blood can pass up but never back. Therefore any muscular motion compressing a segment will force the venous blood into the next higher segment. The entering branches to the main channels are equipped with valves at their roots so there may be no loss of this energy. As the deep veins are surrounded by muscle or lie between muscle and bone, they have a decided advantage over the surface vessels which lie in the superficial tissue outside of the deep fascia and are covered only by skin. So they receive less active support from muscular motion. It is probably due to this fact that the perforating veins of the lower leg are supplied.

To demonstrate the importance of muscular movement in venous circulation of the leg one need only to stand perfectly still long enough to feel the tingling discomfort of the ensuing engorgement.

The veins are not particularly distensible. They possess a tonus, apparently dependent on a sympathetic innervation. Stimulation of the sympathetic supply causes contraction. The circulation is controlled in part through the vasomotor system. This is composed of two sets of fibers, the vasodilators from the nonmedulated fibers, and the vasoconstrictors, which pass as white rami to the sympathetic ganglia from the second thoracic to the second lumbar, which in turn sends out gray fibers to the blood vessels. These nerves react to the amount of sensory stimuli received from the skin, glands and muscles. This stimuli may be induced by thermal and mechanical irritation.

The blood supply to a part may be influenced by osteopathic manipulation of the vasomotor area for that region and by the removal of these lesions which through irritation of the posterior root ganglia or the sympathetic fibers are causing a vasodilatation or a vasoconstriction.

ETIOLOGY

If we recognize that a varicose vein is simply one in which valves are broken, we can readily understand how various factors bring about the disease.

The most important one is an impediment to the onward flow of venous blood. Cardiac and hepatic disease delay the flow of blood and may lead to varicosities. Bony lesions affecting the centers controlling the vessels affected must be considered important in etiology. However, it is most always explainable on an obstructive basis.

The weight of the blood column upon any one valve is comparatively small, but if some form of strain be added to this which tends to force back the blood column the valves are apt to give way.

There are normally fifteen to twenty valves in the great saphenous, with usually an additional one in the femoral vein above the entrance of the saphenous. The great abdominal veins are not supplied with valves, so that in cases of increased intra-abdominal pressure, as in heavy and sustained lifting, there is added to the weight of the blood column above the topmost valve, and in all probability it is here that the breaking down begins. Sometimes one may notice a slight enlargement even on coughing and a definite palpable thrill in the great saphenous just below Poupart's ligament. When there is no evidence of varicosity at a lower level this phenomenon may lead to a diagnosis of femoral hernia.

Other factors which may be of an obstructive nature are (1) pressure due to tight bands, usually above the knee; (2) obstruction above Poupart's ligament which would mechanically cause the retardation of the return flow of venous blood due to (a) constipation, (b) tumors of the pelvis causing obstruction of either or both iliac veins, (c) pregnancy, as varicosities very frequently occur in the early stages of pregnancy and increase as gestation goes on. The prevalence of varicosities among pregnant women cannot be entirely explained on the ground of interference with the venous return flow from the lower extremities.

The association is exceedingly common, though just how the surface engorgement is brought about (as is frequently the case) in the early pregnancy before abdominal tension is much increased, is not at all clear. The most plausible explanation seems to be that which ascribes the varicosities to nutritional disturbances of the vessels resulting from the endocrine changes associated with the temporary cessation of ovarian function.

Heredity plays a most important part. (Ninety-eight per cent in practice.)

Varicosities may appear at the time of puberty in either sex, presumably on account of some malformation of the vein wall or of the valves themselves.

Phlebitis and phlebosclerosis, arising after childbirth or typhoid fever, weakening vessel walls and predisposing to varicosities, are the most distressing form. This type is the most intractable to treatment and prone to ulcer. The infection and clotting are followed by a restoration of the main channel but the valves are crippled and the walls thickened. Such veins even though small are just as varicose as the large tortuous veins more familiarly known.

PATHOLOGY

The internal saphenous is generally affected, the external saphenous more rarely. As the valves fail, the veins dilate and the tissue changes begin. The walls do not receive proper nutrition, and the tunica media atrophies, and the adventitia thickens. They become elongated, tortuous, and sacculated areas are formed. A condition like atheroma frequently develops in their walls, localized pouches occur, or may constitute the main disease. The affected veins may be dilated throughout the entire course even to the finest venous radicle, or only a segment of greater or less extent. The dilatation assumes two chief forms—cylindrical or sacular, but every possible variation between the two is to be seen.

Perhaps the most striking pathological change is the enormous elongation of the vein as a result of which it assumes an exaggerated tortuosity, so that adjacent loops are coiled side by side.

The walls in many places are greatly thickened and in others extremely thin. The contact walls of closely lying loops may fuse and by erosion may lead to artificial communication between the loops. On opening the vessel, the valves are seen to be shrunken and atrophied, thrombi (either parietal or occluding) are seen here and there, especially in the saccular pouches, and occasionally phleboliths are found.

Since the blood is carried down more readily than it can mount up, until elevation of the leg enables it to pass along or until it is pushed upward from the capillary circulation behind, it stagnates.

The height of the blood column above any given point determines the pressure within the vessel, but on straining or increased abdominal pressure, this is greatly intensified. This can cause a rupture of a varicose vein.

Occasionally the perforating veins are involved as well, and the stagnation and back pressure are magnified, for the deep veins cannot relieve the surface veins, and they even add to their load. Usually, however, the perforating veins remain competent, and should the varix develop slowly there occurs what amounts to a collateral circulation.

(Continued on page 468)

THE JOURNAL OF THE
AMERICAN OSTEOPATHIC ASSOCIATION

Publication Office, 1112 North Boulevard, Oak Park, Ill.
Editorial Office, 844 Rush Street, Chicago, Ill.
Tel. Superior 9407
(Copyright 1928, All Rights Reserved)
CYRUS J. GADDIS, D.O.....Editor
CLAYTON N. CLARK, D.O.....Business Manager

Bureau of Associate Editors, John A. MacDonald, Boston, Mass.

Subscription - - - - - Five dollars per annum in advance

Vol. 28 FEBRUARY, 1929 No. 6

SPECIFICITY

Physiologic specificity comprises a field of innumerable reactions. This is the reason for both success and failure in the art of practice. No two clinical problems run parallel in their manifestations. Although there are underlying principles, still physiologic reactions are extremely varied, depending upon a variety of causes ranging all the way from constitutional make-up to local environment. Science reveals a common plan, but experience teaches that variability is no less significant. Naturally a successful art depends upon a sound knowledge of proportional values This is the starting point of osteopathic wisdom.

Osteopathy attacks the solution of these problems from the standpoint of physiological structural reactions. This does not imply that an understanding of chemistry is unimportant. Quite the reverse. Every bit of biochemical knowledge is helpful in evaluating the physiochemical problem at issue. But there is a vast difference in the interpretation of this knowledge, that is, whether the immediate therapeutic application should be physical or chemical.

Granted that the organism is a physiochemical mechanism, why should the chemical viewpoint alone dominate the therapeutic problem? Structure determines function, though function may alter structure. But which is basic? Certainly no structure, no function. Can one say, in this sense, no function no structure? Why all the activity for chemical knowledge while at the same time neglecting the physical part? Is the physical simply a chemical manifestation or aspect bereft of inherent mechanophysiological principles? Then, if so, one may with equal cogency say the physical is an aspect of the mental, whatever that is. Why not at least admit the self-evident fact that there are two sides of a shield? Even if the physical is the medium or vehicle of conduct and exchange of the chemical; even if the chemical, the same as the structural, is inherent; even if the chemical functions normally only when the physical is intact; even if physical exercising and posture and rehabilitation are basic essentials. And even, then, why the chasing of the chemical at the expense or neglect of the physical? Why class distinction in classified knowledge where one truth is equal to and contingent to others?

The physical plane is a fact. An equal fact is that normal chemical change is dependent on the integrity of the physical. Why ignore this outstanding self-evident truth? Why discount, even wholly ignore, an observed and experienced fact?

Right here rests the solution of physiologic specificity as pertains to osteopathic therapeutics. For the structural plane deserves, even demands, the same searching analysis, thought and practice as any other plane. A detailed search equal to that of the chemist or psychiatrist. A search wherein every bit of all bodily data is interpreted in terms of physiological physics. Then specific osteopathic therapy would come into its own heritage. And with what results?

The results would be manifold, definite and unmistakable. For the simple reason structure would then be really observed, analyzed and interpreted in accordance with the nature of facts. This cannot be realized by the backhand way of the chemical method. It demands a frontal structural attack. The surgeon takes his cue from surgical principles.

Is specific osteopathy a problem of just lining up the backbone and pelvis, no matter how important these areas may be? Of course not. These are for obvious reasons good points to start from, to orientate further procedure. Physical bodily reactions are not confined to the character of spinal alignment.

Two facts constantly stare the therapeutist in the face. First, every structural tissue is subject to reactions not identical to any other problem. Secondly, every bodily change is manifested somehow, some way, in the structural. Indeed, just as frequently as there are chemical changes. In fact, each is a part of an interrelated and interdependent physiologic whole. And owing to obvious structural reasons the physical change is not infrequently of primary import.

And this is the key to osteopathic physiologic specificity. True, there are few underlying mechanical principles indicated the same as in science elsewhere. But, equally true, there is a variability, approaching infinity, of detailed application of these principles. Herein arises the significance and importance of the art of osteopathy, no less than of the science. An exhaustive structural examination demands ability, experience and judgment—a veritable life work inferior to no other in its requirements of downright hard study and acquired skill.

To note structural alignment, texture, consistency, posture, as reflected hereditarily and environmentally demands knowledge and no little experience of structural and physiological mechanics and functions. For the bodily condition both in part and a whole is the sum total of an aggregate of factors—the expression of a completed organism, structurally and chemically.

Structural specificity is far from a simple therapeutic problem, for the final expression must be in terms of a correlated biochemism. It is as complex as life itself. In fact, it is life. Simple enough in outline when required fundamentals are elucidated. Otherwise a maze of contradictions.

The great test of specificity is discovering means and ends to influence the capillaries. Keeping this in mind exactness and comprehensiveness is certain to rule therapeutic application. Herein is the field for initiative and freedom for displaying of clinical talent. Specific osteopathy is the searching for the indi-

vidualized abnormal structural variation and its causes and applying the indicated therapy.

What is the maximum limit of structural intactness, correct posture, frequent exercising and fresh air, sunshine, right living and environment, rational diet and rest, and free elimination? Health. Then why not give the physical plane the searching analysis, thought and practice that health demands?

Foreign chemical agents either increase or decrease (usually both) certain functions; in addition there is an extensive side effect. Even so, does this bridge the gap between biochemism and just chemistry? Test tube and living tissue are two different stories which clearly reflect the meaning of biological make-up and specificity. Also, does this imply that abnormal structure is, pathogenetically, a by-product of chemism? If this is true, then the only way to attack the forces that change structure is through biochemistry; for the forces that change structure are admittedly the cause of disease. Then function is biologically of more importance than structure. If so, the forces that change function should be the consistent ground of attack. But, then, where does the fact that structure determines function come in?

All of which shows the one-sided viewpoint of the chemical, its inconsistency, the why of its shifting base, and its lack of specificity.

Specificity is an inherent property, dependent on and subject to the effects of structural environment. The problem is one of its release. For the biological and chemical make-up is already determined.

The osteopathic concept of structure, tissue soil and immunity still occupies the center of the stage—and this is no less than specificity, provided it is both correctly interpreted and applied.

C. P. M.

BASIC PRINCIPLES OF OSTEOPATHY

The purpose of the symposium of this month has been to re-emphasize the basic principles of osteopathy as a science and the application of those principles in the art of osteopathic therapy. With all the discussion nowadays as to what osteopathy should include, what should be taught the embryo osteopath and what should not, it is imperative that from time to time we lay aside all such things and go back to a consideration of those fundamentals upon the strength of which osteopathy began and grew as a separate branch of therapy. So we have gathered together in one symposium much that is being reiterated frequently in various articles in our publications.

Our science rests squarely upon the principles discussed in the articles by Drs. Deason, McConnell and MacBain. Dr. O. E. Smith discusses a transition phase of osteopathic thinking which carries us from pure science to art—the philosophy of osteopathy. We need more of it. The philosopher is not apt to be carried away by the apparent needs of the moment, nor to feel the necessity of altering a sound course to reach a given goal more quickly but less safely. Dr. MacDonald gives us something of profound importance in his classification of the principles of the skilful and—to carry out the language of our subject—artistic application of osteopathic principles. Dr. Frank Smith takes up in his practical way a problem which in the art of osteopathy must be met every day.

Webster defines science as accumulated and accepted knowledge, systematized and formulated with reference to the discovery of general truths, or the operation of general laws—classified knowledge. A moment's thought about that definition cannot fail to remind us that we are sadly lacking in accumulated, systematized and formulated knowledge of osteopathic principles, with a few notable exceptions—especially of the work of the Research Institute. We certainly need more recorded findings as to lesions, states of muscle tension, etc., etc., in relation to the usual findings of physical examination and case history. Added to this must be records of treatment, how severe, what type, how often, the results, the changes in muscle tension, the aspect of the lesion from various angles and in physical findings and subsequent course of the disease. Such records should be available in hundreds and even thousands of cases; and it is not impossible in a few years to obtain them if enough of our men will work at it. In such records, too, we should avoid loose and indeterminate statements and descriptions, and should evolve a more concise, explicit and exact terminology. If we had such a knowledge of osteopathic principles and the facts and findings in the malfunctioning human body to which they are related, the next step along the path which Dr. MacDonald has taken—intelligent application of those principles in the art of therapy, would be much easier.

While there has been much excellent work done along this line, such as Dr. Fryette's physiologic movements, Dr. Webster's work, Dr. McConnell's discussion of tissue feel and the work of Dr. MacDonald, there remains much which, when accomplished, would, I believe, go far toward concentrating our force and energy in the positive advancement of osteopathy rather than in scattering it in more or less futile wandering about seeking just what path that advance should follow.

Briefly, we are simply talking about the necessity of recording and discussing osteopathic pathology, physical findings, treatment, etc. in more detailed, explicit and accurate language, attempting especially to clearly correlate them as Dr. MacDonald has done, avoiding the vague generalities and ambiguities that are so common in osteopathic discussions and papers. We look to making these records in a vastly greater number of cases than we are now doing, to the end that our science and its skilful application shall be more firmly grounded upon more and better understood facts.

PAUL VAN B. ALLEN.

Read the Convention Notes and make your arrangements for Des Moines early.
See page 451

ARE YOU KEEPING UP WITH THEM?

Another symposium with a range of articles that merit keenest study. Dr. Deason perhaps never wrote a better one than that contained herein. Dr. MacBain emphasizes that

There is a strong conviction among many people that the increase of degenerative diseases can be traced partly to the widespread introduction of foreign biologic products into the human system. It is going to take many years—and the practice of immunology is still comparatively young—to determine this point. We have all known instances in individuals where a complete course of immunization—toxin-antitoxin for diphtheria, anti-scarlet fever immunization, smallpox vaccination, and typhoid vaccination, given at comparatively short intervals have had disastrous results on the individual.

Considering the reaction produced by all these agents, the practice of some institutions in submitting their personnel to them seems almost inhuman. It naturally raises the question as to whether or not it would be better for the individual to take a chance on his natural resistive powers than submit to a procedure which has very certain deleterious effects on his health in general.

Dr. Orren E. Smith declares:

Our profession has yet to learn that we have in our possession an exceedingly sharp knife in the powerful technic which some of us use in correcting anatomical lesions; and that its use must be accompanied at all times by scientific knowledge of its effects. To know how to use powerful technic, and when to use it, is knowledge that all of us should covet and use in correcting lesions.

Dr. MacDonald, explaining and stressing his formula governing the application of force in tissue adjustment:

Know your academics. Know your mechanics. Be as good a technician as you can. But know the indications for changing the application of the force you use in adjustment. The corrective force is the power you use in adjustment. The indication for modifying that power cannot be ignored by an expert.

Dr. McConnell, in his remarkable series, Studies in Osteopathic Pathology, again declares that

Maladjustment of structure is only one portion of disability. Technic is only a means to an end. These are parts of a greater whole. Satisfactory work depends on realization of the full osteopathic concept. . . . Malalignment of osseous tissue is only one portion of disease history. It is a part of the clinical picture. The osseous change does not occur without substantial cause. Inception and perpetuation of the structural lesion are important aspects, though the physical mechanics is but one expression of a greater unit. Reciprocal conditioning and modifying relationships are ever present. In other words, pathological forces incept, modify and perpetuate the physical derangement.

. . . Not fully realizing the character of the pathology is the cause of much strong-arm work, of misapplied force and of employing relatively too long power arms, which literally and unduly tear and injure delicate tissues. The aim seems to be to adjust the bones, to get immediate movement of them, at the cost of everything else. No wonder then that there are frequent irritations and constant recurrence of the lesions. A slower adjustment method whose leverages are definitely and distinctly located, utilizing the minimum requirement of applied force, in harmony with the changing variations and degrees of tensions as recovery progresses, and which keep apace with nature's healing processes, is required.

In the previous issue Dr. Webster emphasized this same point in a different way.

Never in the history of osteopathy have there been demonstrated, written and explained more significant scientific facts regarding the principles and practice of osteopathy than are now appearing in the various publications, not alone from the Central office, but in periodicals and lectures throughout the profession.

VARICOSE VEINS

Since 1914, there has been appearing in the literature a great number of articles regarding the injection treatment of varicose veins. These articles and the sort of treatment they describe should be analyzed.

There is no new principle involved in this injection treatment of varicose veins, such palliative methods as injection of irritating substances antedates the more radical surgical operation of Madelung. Apparently Pravaz, the inventor of the hollow needle, attempted injection of varices, many, many years ago. The solutions they used, however (ferric chlorid and mercuric iodid), were too caustic, and many sloughs resulted. Since that time many have dabbled with the method. Real progress has only been made, however, since Linser (in 1911) began treating a series of cases. Sicard (in 1919) and a number of others worked out a method which has since become popular. Further alterations and improvements will doubtlessly come. At present, the injection of sclerosing solutions seems to be perfected to a point where it undoubtedly has a certain field of usefulness.[1]

This procedure should be examined from several angles: (1) the safety; (2) the technical skill required; (3) patient's discomfort or disability; and (4) the end results.

Considering this subject in the order above outlined, should give a rather fair idea of the merits of this popular procedure.

(1) *The Safety.*—The safety with which sclerosing substances may be injected into varicose veins should be considered both as regards morbidity as well as mortality.

The morbidity (or untoward effects not causing death) may be produced by emboli, sloughing of tissue at the site of injection, and the interference with the local circulation because of an inadequate function of the deeper veins of the leg which must undertake the work of the superficial veins that are obliterated by the injection treatment.

Embolism from varicose veins under any condition is very unusual. Many individuals go about with thrombosed varices without ever experiencing this accident. This probably due to a fact that a study of the direction of blood flow in varicose veins has been revealed. It has been demonstrated by Trendelenburg and others that there is a "back flow" of blood in a varix, and that to some degree a vicious circle in the dependent varicose leg occurs. That is, that blood flowed down the valveless veins through the perforating veins into the deep veins and then upward, where most of it goes on to the heart, but some becomes side-tracked into the varicose saphenous vein again.

Disability and death have occurred, however, from emboli, and though infrequent, it must always be considered in our calculations.

[1]McPheeter's, *Surg., Gynec. and Obst.*: 45-541-1927.

Sloughing of the tissue at the site of injection only occurs if some of the sclerosing solution is deposited outside of the vein. This, after skill is acquired, should rarely occur.

The adequate patency of the deep veins is imperative, and should be definitely determined before any measure is taken to obliterate the superficial veins, whether it is to be done by injecting sclerosing solution, ligation, excision, or otherwise.

(2) *Skill Required.*—The skill necessary for the actual injection itself is merely the technic of putting a needle cleanly into sometimes tough, sometimes delicate and elusive vein, which is often relaxed or collapsed. The less blood there is in the vein area to be treated, the less dilution there will be of the sclerosing solution and the more thorough its action, but the more danger there will be of getting some of the solution into the perivascular tissue.

(3) *Patient's Discomfort or Disability.*—There is usually but slight and only transitory discomfort—no anesthetic is required, but it may be unpleasant. According to the usual technic, two to six veins or parts of one vein are injected at each treatment. There may be a severe cramp for a few moments, and there may be a local reaction for one or two days. If the technic has been faulty, there may be sloughs at the point of injection. If the varix is at all extensive, several sittings will be required.

(4) *The End Results.*—The results are rather indefinitely quoted, but reported to be good. One is inclined to suspect that recurrences in nearby untreated veins is rather common, but the sponsors of this method say "the injections can readily be repeated."

As a matter of fact, it is impossible that any method which fails to do what a complete excision does (that is, almost an entire removal of the saphenous vein) have nearly as good late results.

The injector who is afraid to go into the saphenous vein can do very little to obliterate it. Thus, a long varicose stump is left and it is through new connections with this stump that new varicose veins are created. Only by comparing the injection method with the very incomplete excision method of excising the veins from the knee down, can its results be held to equal or surpass the method of excision.

Indications for Injection Method—(1) When the varicose veins are moderate in number and extent. (2) In the presence of varicose ulcers, particularly near a vein, the injection method should be particularly applicable.

Contraindication. — (1) Feeble circulation, severe cardiac or kidney disease, is a contraindication. (2) Venous stasis following a phlebitis of the deep veins should not have the superficial varicose veins injected. The deep veins may not be adequate to carry on the circulation.

As time passes we probably will know more about the good and bad features. At present, there is but very little danger in the procedure, if skillfully and carefully done. It seems such a simple procedure that there is danger that this method will be abused—that it will be done in a careless manner or that the cases for its use will not be properly selected.

As previously stated, the injection method in its present state of development cannot be considered as having as high a percentage of permanent successful results as total excision. It very definitely has its place in properly selected cases, but its limitations and contraindications should be realized.

H. L. Collins.

KNOWLEDGE MEANS CAUTION

The most advertised and perhaps the most used drug is aspirin, for all sorts of conditions. Usually those who are taking it and prescribing it know very little of the deleterious and often dangerous effects that come from its constant use.

From a book entitled, "Pharmacotherapeutics, Materia Medica and Drug Action," by Solis-Cohen and Githens (D. Appleton & Company, 1928) we take the following paragraphs, which may well arrest the attention of many who use aspirin or think of using or prescribing it.

Aspirin, although commonly well borne in moderate dose, is distinctly depressant to the heart. Great cardiac weakness and a tendency to collapse, may follow the administration of a dose representing less than half the quantity of sodium salicylate previously and subsequently well borne by the same patient. Children are particularly subject to this cardiac depression; thus, in a girl of twelve years with scarlatinal arthritis, alarming symptoms were caused by 9 grains of aspirin given in the course of 15 hours, although there was no evidence of endocarditis or pericarditis, and recovery of cardiac vigor ensued on withdrawal of the drug. The cardiac depression may not be immediately evident; but continued resort to aspirin may so weaken the heart, that in an emergency, or under the additional depression of an acute infection, as influenza or pneumonia, it fails to respond. Death may thus be an indirect effect of aspirin poisoning. Moreover, an aspirin habit is easily set up by its use for relief of recurrent headaches and neuralgic pains. The same things are to be said of empirin, which is also an acetylsalicylic ester."

This is just another reason why every osteopathic physician needs to understand all the facts regarding these much-used drugs. There would be fewer prescriptions and fewer telephone instructions to "take an aspirin and I will see you tomorrow."

MICHAEL A. LANE ON PNEUMONIA AND INFLUENZA

Extracts from booklet published by the A. O. A.

No osteopath claims, however, that every case of pneumonia or influenza can be cured instantaneously by osteopathy. The writer claims that the facts above stated can be demonstrated by laboratory experiments upon lower animals, and that he has himself done enough of such demonstration to validate the experimental side of the osteopathic theory and practice.

* * * * *

Many such colds are instantaneously diagnosed by patient and physician alike as "grip." They are not grip. They are "pneumonia colds," and whether there is extreme danger of the germs getting into the air sacs of the lungs, and making there a lobar pneumonia, it is not known, although probably such danger is grave. The writer knows that if such a "pneumonia cold" be given osteopathic treatment as soon as the patient begins to feel the first onset of the fever, the result usually is a rapid exaggeration of all

symptoms for twenty-four hours after the treatment, and then within thirty-six hours their total disappearance, and a complete recovery!

If such a "pneumonia cold" be treated while the patient feels only the malaise, there will be no development of any further symptom whatever, and the ill feeling rapidly vanishes in a few hours, not to return!

Osteopathic treatment—a thorough one—will greatly shorten the course of a "pneumonia cold"!

Why, then, waste valuable time waiting for nature, and running the risk of a lobar pneumonia?

What is true of head and throat colds caused by pneumonia germs, and what is true of the more deeply-seated pneumonia germs the multiplication of which causes the reaction in the lung called "lobar" pneumonia—or just simply pneumonia—is quite as true of that body-racking, nerve-rending, head-splitting, bone-aching, nose and eye torturing infection that is the true influenza, or grip, in which the bacteriologist expert can find countless billions of the minute organism called bacillus influenzæ in the secretions from the nose and throat. Osteopathic treatment, when this tiny diabolism is the invader, will stop its activities in a fashion identical with that stated above with concern to the germ of pneumonia.

To be convinced of this, such sufferers should go to an osteopathic physician. They may get more satisfactory results by skipping treatment the day following the first treatment, that is, while they are "worse," but they should not fail to return for a treatment the following day, when they feel better. The second treatment will cause a very slight relapse on the following day, or in the evening of the same day. That is to be expected, for the treatment has given a second hurry call on the reserves by cleaning out and sending into the blood the last bit of toxin.

Thirty-third Annual Convention of the A. O. A.

Fort Des Moines Hotel, Des Moines, Ia.

June 17-22, 1929

DES MOINES CONVENTION TRANSPORTATION COMMITTEE

Dr. J. J. O'Connor, Kent Bldg., Toronto, Ont., Canada.
Dr. E. R. Kraus, 2345 Broadway, New York City.
Dr. Lamar K. Tuttle, Julia Tuttle Hotel, Miami, Fla.
Dr. A. B. Johnson, 504 Brown Bldg., Louisville, Ky.
Dr. C. N. Clark, 844 Rush St., Chicago, Ill.
Dr. V. C. Bassett, 418 Allen Bldg., Dallas, Texas.
Dr. N. Paul McKay, 705 Waldheim Bldg., Kansas City, Mo.
Dr. D. E. McAlpin, 422 Metropolitan Bldg., Long Beach, Cal.
Dr. R. M. Jones, 320 Empire Bldg., Denver, Colo.
Dr. Luther H. Howland, 908 Selling Bldg., Portland, Ore.
Dr. R. M. King, 47 South Ninth St., Minneapolis, Minn.

Gentlemen:

These doctors here listed have been appointed as Vice-Chairmen of the Transportation Committee for the approaching A. O. A. convention.

The intent has been to cover the entire United States and eastern Canada. From this listing I am sure each of you will vision approximately the territory for which you should be responsible. For example, Dr. Kraus will know whether the natural current of travel from North Carolina will join his route to Chicago, or whether it would more naturally connect with the lines from the extreme southeast, in which case it would be in Dr. Tuttle's territory.

Each "inland" chairman should cooperate with the chairmen in the more extreme sections, in planning and arranging travel service that will connect with his routings toward Des Moines.

The Chicago, Rock Island & Pacific railroad has been designated as the official route because it offers the most direct service from the various gateways into Des Moines—Chicago from the east, Denver from the west, Minneapolis from the north and Kansas City from the south. I am furnishing the General Passenger Agent of this road with the names of the vice-chairmen. Railroad representatives will no doubt visit each of you within the near future to offer every assistance possible in making your plans and arranging for such special transportation service as those from your section of the country may desire. Feel free to enlist their assistance which will be a big help to you.

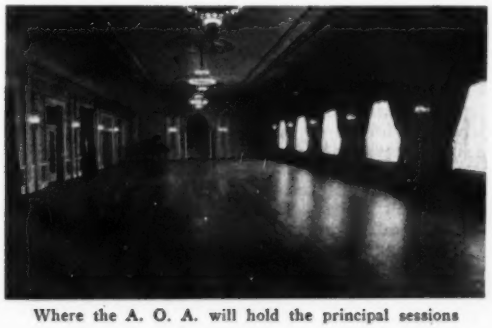
Each should study the various routes from his section, with the idea of supplying the best service possible for those who will attend this convention. For example, Dr. Kraus may see fit to direct his travel over the New York Central lines, for the reason that this road uses the same station in Chicago as does the Rock Island.

Much pleasure and benefit can be had by those making the trip, if a sufficient number can be induced to make their reservations for the same train to warrant chartering a special car or even a special train for them. Each chairman should endeavor to promote interest in such a plan among those in his section of the country.

In putting out the information you wish, you will probably want to use the various professional publications that reach the profession in your section; and remember, the A. O. A. JOURNAL will also give us necessary space for this purpose. There will be only three or four more issues of THE JOURNAL previous to this convention, so we should lose no time in planning for its use.

I want to thank each of you for accepting your appointment to this committee. As previously stated, it will not require a very great sacrifice of time on your part; yet each can do a great deal in stimulating interest for attending this convention, and I hope your enthusiasm will prompt your initiative in this respect. You may honestly anticipate one of the very best conventions in the history of our profession. Let me urge your efforts in working up parties

Main cafe in the Fort Des Moines Hotel, Des Moines, Iowa



Where the A. O. A. will hold the principal sessions

and groups for special car or train accommodations for the trip.

Further information will be forthcoming from time to time. In the meantime, please call upon me for any assistance I can give; and keep in close touch with this office so our activities may be coordinated.

Sincerely yours,

(Signed) C. N. STRYKER.

Department of Professional Affairs

RAY B. GILMOUR, Chairman
Sioux City, Iowa

HOSPITALS AND SANITARIUMS

ARTHUR D. BECKER, Chairman
Kirksville, Mo.

ROCKY MOUNTAIN OSTEOPATHIC HOSPITAL

The Monthly Bulletin issued by the Rocky Mountain Hospital has developed into a very interesting little state paper, with a good collection of personal news each month. Dr. C. R. Starks is editor.

DES MOINES GENERAL HOSPITAL

"Osteopaths will spend $35,000 remodeling general hospital" was the head that streamed clear across the front page of the commercial section of the Des Moines Sunday *Register* on January 6. The story reported that plans had been announced for the erection of an addition, and for remodeling and renovating the Des Moines General Hospital and superintendent's home. The addition will provide quarters for convalescents, the walls being of glass which will permit the passage of ultraviolet rays. The remodeling of the hospital and residence adjoining will include new exterior finish of cement.

MERCY HOSPITAL CLINIC—NURSES' HOME

Dr. F. P. Walker, Chief Surgeon of the Mercy Hospital and Sanatorium, St. Joseph, Mo., announces the continuance of clinics the third Thursday of each month. All clinics are to be held under the personal supervision of Mercy Hospital. The fee is being raised from three to five dollars. This covers registration, physical examination, blood count and urinalysis, both microscopic and chemical. In future, copies of the examination sheets and reports of laboratory and x-ray findings will be sent to the patient's doctor as soon as the examination is completed.

In addition to this charity work, a more efficient clinic is being built up to which it is believed any osteopathic physician can be proud to bring or refer patients.

Work is reported as being nearly complete on the home for the nursing staff which is located in the rear of the main building.

WORK COMMENCED ON PHILADELPHIA HOSPITAL

Dr. D. L. Clark, president of the American Osteopathic Association, was present on January 7, when ground was broken at Philadelphia, for the new $875,000 college and hospital building group. The occasion was the 30th anniversary of the founding of the college.

The new site, 281x250 ft., is valued at $110,000. As explained in the December JOURNAL, the new building will be a four-story structure of brick and limestone in English style. The left wing will house the college and the right, the hospital, with a transverse section in which will be located the administrative offices.

PUBLIC EDUCATION AND HOSPITAL FUNDS

It is reported by a prominent osteopathic physician that $150,000 could have been had recently for the building of a special "unit" or "wing" to a large hospital for the exclusive use of the osteopathic profession, except for the active interference and even misrepresentation of two or three medical doctors.

It seems that a campaign was in progress to raise several million dollars for the construction of a large, modern hospital. During the drive a medical doctor called upon a prominent lady. She readily agreed to contribute the sum of one hundred and fifty thousand dollars, provided it would be used for an osteopathic unit. Her proposition was seemingly acceptable at the time. In a few days, however, another party returned to see her, with the statement that because of the objections of the staff, such a conditional gift could not be accepted. But he assured her, so the story goes, that reputable osteopathic physicians were being admitted to the present institution and would be recognized in the new one. She then amended her offer to give the same amount of money, conditional upon it being devoted to a special unit, in which practical nurses would be employed exclusively for the benefit of people of moderate means, on account of the high prices charged by graduate nurses. This offer was refused as being unfair to the nurses in training in the hospital, so the lady decided she would not make any contribution at all.

However, a third individual seems to have been sent out with instructions to get the money. He had been this lady's family physician, so that the patient felt under no little obligation to him, and he finally persuaded her to make the contribution without any conditions attached. So the osteopathic profession was not benefited as intended but the medical hospital got the money.

The real facts are: The first physician, who had even made a second visit in order to secure this generous contribution, had himself been responsible for excluding a well-known and reputable osteopathic physician from the very hospital in question. He knew that the rules of the institution and of his own profession would not permit him to practice therein if osteopathic physicians were admitted.

The osteopathic profession, by acting together at the right time, could have informed their friends of the methods being used against them, and could have seen to the making of gifts of millions of dollars conditioned on admission of osteopathic physicians and their patients.

DR. WILLIAM BRADY ON HOSPITAL CLIQUES

The Brooklyn (New York) *Daily Eagle* of December 23, had a three-line, three-column head "Tells of Doctor Cliques Operating Publicly Supported Hospitals. Barring Admittance to All Outside Physicians" in which Dr. William Brady, well-known medical writer, said:

> Queer episode grew out of the anomalous, not to say comical, chaos of State regulation of the healing art. In a State where osteopathic physicians are licensed on the same footing, and by the same examination, as are all other brands of healers, one legally licensed osteopathic physician sought to treat his patient in a city hospital, maintained by public taxes, of which the osteopathic physician and his patients paid their share. The institution was or is controlled by "regular" physicians, and the board of managers refused to permit this legally qualified physician to take his patients to the hospital—he must surrender his patients to "physicians approved by the board."
>
> Although I am not sure whether I should change this policy if I had control of the hospital, it seems to me a queer thing. Here is the State pretending to give the doctor the right to practice healing, and a municipality within the State restricting him from the use of facilities provided by the public for public use. Comical, I call it. The joke is on the people whose legislative representatives put over these trick laws. Probably a certain rancor in the hearts of the regular doctors over the treatment the regular profession constantly receives from the trick legislators, prompts them to slam the door in the osteopath's face like that.
>
> If it were a private or semi-private institution, not wholly maintained with public funds, it would be perfectly proper for the owners or managers to restrict its facilities in any way they might desire. But it is scandalous that a public institution can be thus abused.
>
> This strange incident suggests that great amount of evil that is done by what we call "closed" hospitals. That is, certain public hospitals, in whole or in part supported by the public or endowment funds, have an exclusive clique or coterie of physicians named on the staff and only these pet doctors may attend the patients who enter the hospital. This is a shameful abuse of administration. Some such favoritism may have been less objectionable in a bygone day when only Dr. De Scent had the hereditary ability to "pronounce" things thus and so and the unquestioned complacence to write certificates covering all mistakes. It is an anachronism today, a mere holdover game of the petty medical politicians.

"CLOSED" STAFFS

I have served my time as a hospital staff man and I know fairly well whereof I speak. In my judgment today one finds the best physicians holding no such hospital appointments. The climbers, the hangers-on, the pampered pets, and the politically fortunate young hopefuls, man these "closed" staffs. I do not think or imply that a doctor is a poor one because he holds an appointment on a "closed" staff. I merely say, that in my judgment such appointment by no means serves as an index that the man or woman holding it is a competent physician or specialist. If the prestige attached to hospital staff connections still fool the laity, it no longer impresses the medical profession, for in the profession we know too well that the appointee's medical ability has practically nothing to do with his selection for the staff position. My remarks do not apply to teachers who must necessarily hold hospital staff appointments as part of their professional teaching.

The callow youth just finished medical school makes a fair bargain as interne for a year without pay or with merely his expenses paid by the hospital. He needs experience, and the free or charity patients are properly available for him to practice on. But having had his year of experience, that is enough for him to buy. It is an economic crime that any doctor should go on giving away as much as 25 per cent of his productive time year after year, as a member of the staff of a "closed" hospital.

In place of these "closed" hospital cliques, we should have open hospitals, surely in every community where the hospitals pretend to serve the public. Every legally qualified physician or healer should have the right to take his patients to the hospital and treat them there. That is only a matter of justice and honesty. If your public hospital restricts the use of its facilities to any group or preferred list of doctors, and your doctor is not on that preferred list (as is likely if he is a good doctor) then you are overlooking a duty when you fail to resent the abuse and especially when the hospital or institution has the nerve to ask you to contribute toward its support.

BUREAU OF PROFESSIONAL DEVELOPMENT

JOHN E. ROGERS, Chairman
411 First Nat'l Bank Bldg., Oshkosh, Wis.

THE STUDY GROUP IN ONTARIO

One of the most effective ways to develop professionally is to meet with men of one purpose to study problems that may present themselves. Plans are worked out in different sections of our country to do this. One of the most unique plans that has come to our attention is the Study Group conducted in Ontario. In an early issue of THE JOURNAL we hope to present a history of this Study Group. Something concerning its operation follows:

Membership: Open to all osteopaths who are willing to attend regularly, and to take part in the discussions as well as prepare occasional papers. Membership includes physicians within a radius of 150 miles.

Expense: A fixed charge for each meeting is made, and the expense of instructor, and the travelling expenses of those members coming from a distance are borne by this fund. In this way, those who live in the town where the meetings are held, share the expense equally with those who have to come from a long distance.

Time of Meeting: The time of meeting is arranged to meet the convenience of the majority of members attending. On account of the long distance travelled by some members of the group, sessions are held for ten consecutive weeks in the Autumn and ten consecutive weeks in the Spring. This gives ample time to thoroughly discuss any given subject.

Subjects of Study: A definite program dealing with some particular phase of medical knowledge of interest to the majority of the members is drawn up before each session. This enables the group to secure the best fitted speakers and to outline the work wanted. As an example, one session may be devoted to the anatomical and physiological study of the sympathetic nervous system, another session to the study of diabetes.

Instruction: An outside instructor is secured and paid from the funds of the group. He is allotted one hour per week. The other hour of the session is assigned to one of the group to amplify the discussion of the outside instructor and to bring out its osteopathic significance.

Department of Public Affairs

HUBERT J. POCOCK, Chairman
C. P. R. Bldg., Toronto, Ont., Can.

BUREAU OF CLINICS

VICTOR W. PURDY, Chairman
725 Caswell Bldg., Milwaukee, Wis.

Normal Spine Week—March 17-23

In a concerted way individual physicians, osteopathic groups, and already organized clinics throughout the country will again give a portion of each day to examining children during this much-heralded Normal Spine Week.

Those of you who have been following this movement from year to year cannot but observe the benefits that accrue to the participants.

There is created a cooperative spirit which lasts throughout the year. Team work is developed. Where there is a group of osteopathic physicians so united for a common cause—there also you will find a stronghold of osteopathy, a power for good.

This in turn creates an impression before the public that our abilities are unified, our individualities merged so that the best may be given. It shows our willingness to work together, giving credit to each for his talent. A showing of harmony amongst our members makes for good will in the minds of the public.

To the children and parents there is given a new lease on life, new hopes and realities, after having been shown, before it was too late, how to obtain a normal healthy existence.

THE TIME TO START A CLINIC

As mentioned at this time in other years—this is the opportune time for the formation of a clinic, to follow through the year. The fact that your fellows in many other localities are celebrating Normal Spine Week gives weight to the reason why you should also participate.

It calls for an expenditure of effort, time and possibly money, either of which could not be expended to better advantage.

Effort—in laying out plans of procedure. There must be thought given to what is to be done, and this well in advance.

Organization must be perfected, responsibility delegated—no matter how small the group and even when the individual is going it alone.

The success or failure of a clinic largely depends upon the machinery of that clinic, which is aside from the technical skill required in the examination or treating of the patient.

This is too big a thing not to prepare for with care. Because it is a clinic—something to be offered free to those who come for guidance and help—demands more of you than when you are secluded in your office attending to your own business. This business of a clinic is something broader, bigger and should affect and influence more people. Furthermore, it is something that the public at large will have either direct or indirect interest in. The thought is—be businesslike, realize the importance of the undertaking and value the opportunity.

Time—give it freely. Be punctual to the program. Educate your patients now to the fact that the week of March 17-23 is Normal Spine Week, and your services will be given, according to plans made, to the underprivileged. You will receive commendation for such magnanimity of heart.

LAST YEAR'S EFFORTS

The successes of last year we anticipate will be repeated. The experience gained will serve to perfect the work and even greater interest should be aroused.

One group in Missouri attracted physicians from surrounding towns to assist them and with them came the needy. This group had the support of the Parent-Teachers Council, and with the approval of the superintendent of schools notices were sent to all city schools and two colleges. The newspapers cooperated splendidly. Cash prizes were awarded for the most perfect spines. In all 110 cases were examined.

A mid-western town secured the services of one of our outstanding clinicians. School children between the ages of 5 and 15 years were examined and particular emphasis was placed upon the advice given to parents.

One of our large, well-organized clinics made special preparation for this week. Free spinal examinations were given each day from 10 a. m. to 4 p. m. Concluding the week's program a normal spine contest was held for children from 4 to 12 years of age. As an award a certificate was given, stating that the winner was found to have the most perfect spine of any child examined and also entitling to free semi-annual spinal examinations at the clinic.

An eastern State Society aroused its membership to action and its efforts were commendable. Their members were allotted definite days and hours when they should function at the clinic, working in groups.

Patients examined and needing treatment were referred to recent graduates, which by-product of such effort on a large scale is worthy of emulation.

All the schools within a radius of ten miles, the Y. M. C. A's, Y. W. C. A's, parochial schools, Boy Scout and Girl Scout councils, etc., were sent letters and cards telling them of Normal Spine Week.

Publicity was handled by an experienced man, cards announcing the clinic were sent out to an active mailing list, including teachers and educators, and the doctors were urged to talk Normal Spine Week to their patients.

The publicity should be given considerable thought. This can be easily handled by obtaining from the Central office at Chicago suitable news stories. Radio talks have been given and public lectures in the evening have aroused interest. There is no end to the possibilities.

THIS YEAR'S ACTIVITIES

Newspaper clippings just received announce—at the meeting of the Worcester, Mass., District Osteopathic Society plans were discussed for observing Normal Spine Week. A children's clinic will be conducted to aid in the detecting and correcting of spinal curvature in its incipiency and to emphasize the importance of the spine in relation to health. A clinic committee was appointed, including Dr. Lewis L. Jones and Dr. J. H. Sprague, to submit plans for observance of the special week.

Another clipping tells that the Colorado Springs Osteopathic Association have inaugurated a free clinic, to be held Saturdays from 3 to 6 o'clock. They undoubtedly will observe the entire week of March 17-23.

Dr. J. G. Wagenseller, Lake City, Minn., is conducting a free clinic for children under twelve years of age every Saturday morning between the hours of 9 and 11. Five clinics have been held so far with a good attendance.

To those who are isolated from the big clinic centers there remains the opportunity to do their bit and in a proportionatally big way. There is usually some fellow osteopath within call or reach with whom you can agree to share your time and skill. Certain days spent at each one's office, all arranged by schedule, will satisfactorily carry out the spirit of the undertaking.

Keep painstaking records of each case examined. We hope some day to offer you a clinic record form which will embody the essentials to look for. Make your record in duplicate so that you can keep one on file and the other is given to the patient or his parent. That record will be proof of your thoroughness and will be educational in showing that we are capable of making complete physical examinations and, where needed, the chemical examination.

Even though alone in this, elicit the interest and help of your friends and patients to assist in taking records, preparing patients for examination and following up those needing further care.

NORMAL SPINE WEEK, MARCH 17-23,
IS YOUR OPPORTUNITY

V. W. P.

FOOTBALL INJURIES CLINIC, CHICAGO

For the third year, a clinic for injured football players was held during the season at Palmer Park, Chicago, sponsored by the South End Chamber of Commerce, with physicians and students from the Chicago College of Osteopathy performing the service. No charge was made for professional services, but local teams contributed to a fund to defray the cost of the clinic.

Although there was not so much football this season, clinic workers were busy on Wednesday evenings and Sunday afternoons from September 23 to December 2 inclusive. Injuries were handled from fifteen teams and four parks—Palmer, Tuley, Bessemer and Trumbull. Ten of the teams were local and the other five visiting.

In all, there were 79 patients requiring a total of 381 treatments; and of all the injuries handled only three were serious—a fractured thigh, a skull fracture and a fracture of the second cervical vertebra (neck) with a skull fracture.

Dr. F. F. Peckham is head of the general clinic, but the Football Injuries Clinic was under the active supervision of Dr. R. R. Peckham, assisted by Dr. H. Remsberg. Student physicians included Frantz, Crowner, A. C. Peckham, Rook, Walling, Miller, Weber, Foreman and Erbe.

X-ray by Dr. E. R. Hoskins, hospital roentgenologist, assisted by Dr. M. Beilke. Casts by Drs. Parker, Fogarty, Bauer, Beilke and Remsberg.

J. A. Stinson,
C. C. O. 1930.

INDUSTRIAL AND INSTITUTIONAL SERVICE

E. A. WARD, Chairman
601 Second National Bank Building, Saginaw, Mich.

To illustrate how one of our physicians used his contacts with industrial concerns to further the development of this bureau and thereby as a result increase his own practice came to my attention recently.

Dr. R. V. Gladieux, located in Grand Rapids, Michigan, about one year ago. He located his office in an outlying residential and business community and after about six months he went around to the various factories and concerns nearby, soliciting them for all or part of their industrial accident work—stressing the points that he was conveniently located, had long office hours, was prepared and equipped to take care of injuries, and that in most types of cases could render a superior service. Altogether, he called upon fifty-eight concerns and of these fifty-two received him very cordially and agreed to send all or part of their accident cases to him. These cases are paid for under liability insurance or the Workman's Compensation Act and the employer or employee can exercise their prerogative in choosing a doctor. The work sent him by these concerns provided a fair-sized addition to his income.

Our school of practice is young compared to the older schools and one thing we need in each community is more of our physicians to go out and do evangelistic work such as Dr. Gladieux did in his city.

The problems of health for the wage earner consist of a great general group, some of these peculiar to the trade themselves.

Speaking generally, there seems to be a concentration of certain disease tendencies among industrial workers. One of these diseases is tuberculosis. Dublin, a well known statistician, has summarized some interesting findings in the industrial field which apply particularly to that group of men between the ages of twenty-five and forty-four. He finds that six out of ten deaths in this group are due to tuberculosis, influenza, pneumonia, heart disease and accidents. Of the total number of deaths, almost twenty-three per cent are due to tuberculosis alone. This emphasizes for us that a reasonably adequate system of health supervision for the employees themselves should be an essential part of the organization of every modern industry. No factory owner would dream of operating machine tools without competent experts in his employ to keep them in working order; and the supervision of the living machine in any factory is even more essential for maximum productivity.

In athletics several items of interest to this bureau have come to my attention lately. Among osteopathic

physicians caring for football teams during the last season there were Drs. W. I. Bupp, Holdenville, Okla., Holdenville High School team, and Harrison McBains, Orlando, Fla., who sent the OSTEOPATHIC MAGAZINE to the coach of the high school football team and to each of the players. Dr. John E. Rogers, Oshkosh, Wis., has concluded his fifth year in caring for the football boys in the local high school and his third year with the teachers college.

At the state university homecoming at Missoula, Mont., there was great enthusiasm for the football squad, the smallest in the conference, in spite of the fact that the breaks were against them this season. Dr. Emerson Stone led in community singing and Dr. Asa Willard, who celebrated his twenty-fifth year of attendance on the Montana football teams in the field, was one of the speakers.

NATIONAL AFFAIRS

C. B. ATZEN, Chairman
408 Omaha National Bank Building, Omaha, Nebr.

OHIO

The profession in Ohio is undergoing legislative birth pains. The younger element seems to be desirous of having all restrictions removed but doubt somewhat the advisability of giving equal liberty to the older members. The older members you see, have not had as many months of college training and, therefore, are not entitled to the same unlimited privileges. The fact that the older members have had years of practical experience and have met the early hardships is, of course, not worthy of consideration. Such is the viewpoint of youth.

May the writer voice a word of caution? It is this: Beware of dividing your ranks into two camps, dissipating your strength by means of internal friction. Nothing will be more pleasing to the common enemy and please remember that no law can be constructed that is in tune with every condition.

The solution of this problem is best answered by past history. Whenever and wherever legislation has been enacted to govern the duties of a class whether it be in medicine, dentistry, pharmacy or law, the personnel of the entire class, old as well as young, have benefited by means of the new law. Why change the law in its application to osteopathic practitioners? The older practitioners will be the least likely to abuse enlarged privileges, for experience has taught the older members to exercise caution in all things that they do not fully understand.

COLORADO

The profession in Colorado has adopted the plan of introducing a bill to open all hospitals or similar institutions, supported in whole or in part from public revenues, either municipal or state, to all physicians licensed by the state. Copy of this bill will be found in THE JOURNAL, October, 1928, p. 127.

The profession in Colorado desiring to put teeth into the bill added Section 2, containing a penalty clause. Section 2 was disapproved by Attorney Herring because it would cause violent opposition to the bill, accomplish no good as to enforcement and would almost certainly defeat the passage of the bill. It is hoped that the Colorado profession will heed Attorney Herring's opinion.

NEBRASKA

Legislative Chairman E. M. Cramb of Lincoln has also been instructed to introduce a bill to open up tax-exempt institutions to all physicians licensed by the state. It is hoped that the profession in the state will at once get in touch with their respective senators and representatives and urge the passage of this measure into law.

ARKANSAS

Dr. Donald M. Lewis of Little Rock submitted for approval proposed amendments to the osteopathic statutes of Arkansas. Attorney Herring expressed satisfaction and assured Dr. Lewis that the amendments would remove the objectionable features of the Arkansas statutes and grant physician and surgeon's rights to Arkansas osteopathic practitioners. May this good work be taken up by other states suffering with discriminatory restrictions.

TEXAS

Amendments to the Texas medical practice act were submitted to Attorney Herring for scrutiny by Dr. Phil R. Russell.

The amendments submitted covered a number of problems, all of which were intended to give additional regulatory control to the Board of Medical Examiners.

First, the amendments require an annual registration by all physicians licensed to practice in Texas. Second, give control in the regulation of itinerant practitioners. Third, give discretionary control to the Board of Medical Examiners as to who shall be eligible for entrance into the state. Fourth, make unlawful the sale of medicine by street venders as is often done by "Medicine Shows" and lastly, there is a provision that the Attorney General of the state shall prosecute all violations coming within the Act, which the County Attorney fails or refused to prosecute.

If the amendments become law, Texas will become very unwholesome to all unlawful practitioners.

It even makes it unlawful for Christian Scientists to accept remuneration for their services. This last provision in the judgment of the chairman of this committee, will start a storm of protest that will be difficult to overcome even by the proponents of these amendments.

MARYLAND

A request came to the Committee of National Affairs from Dr. Le Grande M. Bennett, Baltimore, Maryland, for an osteopathic bill to put before the legislature, so drawn as to grant the right to the Maryland practitioners to practice osteopathy in the state, as taught in osteopathic colleges.

Attorney Herring suggests the following sections as amendments to the present law, or to be incorporated into a new bill.

Section (a) The examination of those who desire to practice as osteopathic physicians and surgeons, shall embrace such subjects as are taught in reputable osteopathic colleges recognized by the American Osteopathic Association.

Section (b) Every applicant who successfully passes such an examination shall be licensed to practice as an osteopathic physician and surgeon as taught and defined by reputable osteopathic colleges in the United States, recognized as such by the American Osteopathic Association.

Would it not be a good plan for the practitioners in all states where the practice is restricted by hampering laws, to introduce an amendment similar to the above?

A recent week's run over Ohio's notable clinic circuit, where for the last few years exceptional work has been done. This year finds them on their toes—alert, united and working. Well attended meetings, school and club talks, with increasing interest in things osteopathic.

A Sunday afternoon meeting in Detroit found a like situation, with more than eighty present and everybody apparently of one mind and ready to go.—Ed.

OSTEOPATHIC EXHIBITS

E. C. BRANN, Chairman
705 First Nat'l Bank Bldg., Wichita, Kans.

COOPERATION OF INSTITUTIONS NEEDED

The campaign for osteopathic exhibits is going forward and gaining momentum. While not many of our state societies take advantage of maintaining spaces at fairs, more of our physicians are planning exhibits for show windows. This has an advantage over the exhibits at fairs, as they can be arranged any time of the year and by any osteopathic physician in any town where they practice.

In order to carry out window displays showing all of the osteopathic institutions in the world, we must have the cooperation of all such institutions. This means that each institution shall have pictures and a brief history, when organized, capacity, nature of work done, etc., ready to send to any doctor asking for them to make his display complete. A special point should be made to have everything in the history that could be used to aid in educating the laity to think osteopathically.

In many places the average person does not know that the osteopathic physician is a trained physician in every sense of the word. Osteopathic exhibits whether at fairs or in show windows will help to correct this idea.

STATE LEGAL AND LEGISLATIVE

ASA WILLARD, State Legislative Advisor
(Address all legislative inquiries and data to Dr. Ray G. Hulburt, Director of Information and Statistics at the Central office.)

RADIOS VS. DOCTORS

Newspapers report that the Hollywood (Calif.) city council has refused to approve the anti-static ordinance submitted for passage upon recommendation of the building and safety committee. This ordinance, prepared by the city attorney, is said to have been designed to prohibit any "person or corporation from operating a generator causing high frequency oscillations in radio broadcasting or receiving apparatus between six and eleven o'clock in the evening." A number of electrical contrivances employed by medical and osteopathic physicians would have been affected.

NARCOTIC RIGHTS IN MICHIGAN

A federal district judge in Michigan has again ruled that an osteopathic physician is entitled to possess and dispense narcotic drugs in that state and should be registered under the Harrison act.

Dr. Myron A. Hostetler, Detroit, filed an application on September 17, 1928, for registration under the Harrison act, and the Collector of Internal Revenue for the First District declined to accept the fee or register the doctor on the ground that Deputy Commissioner Nutt, in charge of the narcotic division at Washington, D. C., had refused to recognize the decision of the Federal Court in the southern division of the eastern district of Michigan in the case of Dr. Walter F. Bruer, as affecting any osteopathic physicians in Michigan other than Dr. Bruer (*Jour. Am. Osteo. Assn.*, Nov., 1927, p. 192).

The judge in this case said that since that other decision, the Supreme Court of Michigan in the case of Mutual Life Insurance Company vs. Geleynse (241 Mich. 659), held that an osteopath is a physician or a practitioner —using the terms "physician" and "practitioner" as synonymous—which is held as strengthening the previous decision by another federal judge, in the Bruer case.

NARCOTIC REGISTRATION IN MISSOURI

A ruling from the office of the Attorney-General of Missouri, dated October 13, was to the effect that osteopathic physicians in that state are not entitled to registration under the Harrison law. A copy of this opinion was received too late to find place on the page devoted to this department last month, and so appeared on page 365.

Dr. George M. Laughlin reports that he and Dr. A. G. Hildreth induced the Attorney-General to withdraw that opinion and on January 17 the Attorney-General wrote to the narcotic agent at Kansas City, saying in part:

"Narcotics have been used by osteopaths for a great many years for the purpose of relieving pain. This opinion will interfere with this right, which, because of usage, is practically a vested right.

"Because of the importance of the matter, I feel that this office should not take the responsibility of disturbing this right, and therefore I withdraw said opinion dated October 13th."

It may be interesting to know of steps which the narcotic agent and the Bureau of Prohibition at Washington had taken in the meantime.

It seems that following up the decision, the narcotic agent in charge at Kansas City, Missouri, wrote to the Bureau of Prohibition at Washington, saying that applications for registration under the Harrison law coming from the collectors of internal revenue at Kansas City and St. Louis, had been returned by him to them, not approved and with a citation of the opinion in question. The narcotic agent asked that instructions be issued relative to the osteopathic physicians in the state already registered under the law and Deputy Commissioner L. G. Nutt suggested under date of December 29, that the narcotic agent write to all registrants in Class 4, who are qualified as osteopaths only under the laws of the State of Missouri, a letter in substance as follows:

"Section 1 of the Act of December 17, 1914, as amended, commonly known as the Harrison narcotic law, provides for the registration, upon payment of tax of $1.00 each year, or fraction thereof, of 'physicians, dentists, veterinary surgeons, *and other practitioners lawfully entitled to distribute, dispense, give away or administer* narcotic drugs to patients upon whom they, in the course of their professional practice, are in attendance.

"It has been brought to the attention of this office that on October 13, 1928, the office of the Attorney General of the State of Missouri, rendered an opinion 'that an osteopath, under the laws of Missouri, is not permitted to prescribe or administer narcotic drugs.'

"A person applying for registration under the Harrison narcotic law must furnish an affidavit or acknowledgment before two witnesses, showing him to be legally qualified or authorized under the laws of the jurisdiction in which he is engaged, or proposes to engage, in any business, to distribute, dispense, give away or administer narcotic drugs, and the false and fraudulent execution or signing of an application (on Form 678 or 678-a) or supporting affidavit, subjects the offending person to the penalties provided by Section 3451, Revised Statutes (see Article 3, Regulations No. 5). In the light of the opinion rendered by the office of the Attorney-General above quoted, it is evident that persons qualified as osteopaths only, under the laws of the State of Missouri, are not entitled to registration as practitioners under the Harrison narcotic law, and any person so registering lays himself liable to prosecution for violation of Sec. 3451, Revised Statutes, as above indicated. Moreover, it may be stated that a tax stamp issued under the Harrison act does not confer authority upon the registrant to prescribe, dispense or sell narcotic drugs in violation of any State law on the subject.

"In the event that you are not duly qualified to prescribe or dispense narcotic drugs in connection with your professional practice, having registered under a misapprehension of your rights under the State law in this regard, you are advised that you may, if you so desire, surrender to this office the Federal special tax stamp heretofore issued to you under the Harrison act, for cancellation. This action will necessitate some lawful disposition being made of all the stock of narcotic drugs or preparations in your possession at the time the stamp is surrendered for cancellation."

OSTEOPATHY AND MISSOURI CHARITABLE HOSPITALS

The Buchanan County (Missouri) Osteopathic Society has sent a letter to the various hospitals in St. Joseph, requesting that licensed osteopathic physicians and surgeons be given the same privileges in such hospitals as are extended to those of the old school.

The first paragraph of the letter points out that "The hospital which you have the honor to manage and operate is chartered under the laws of the state of Missouri as a charitable institution, is free from taxation, and is supported by donations, free-will offerings, or public subscription."

It is reported that the superintendent of the Missouri Methodist Hospital said that it was not within his province to pass on such matters and that he was referring the letter to the Board of Trustees which he is quoted as saying "is absolutely helpless in the matter of the acceptance of this proposition."

OSTEOPATHY AND WORKMEN'S COMPENSATION ACT

The office of the Attorney-General in the state of Washington rendered an opinion on November 23 that osteopathic physicians and surgeons are not contemplated in the workmen's compensation act where it provides that an injured workman "shall receive . . . proper and necessary medical and surgical services, at the hands of a physician of his own choice. . . ."

The ruling says in part:

"The law relating to the general practice of medicine and surgery was passed before the workmen's compensation act and it relates to the practitioners generally designated as 'of the old school.' The laws relating to osteopathy and drugless healing were passed in 1919, while the workmen's compensation act was passed in 1911, and the supplemental medical aid provisions were passed in 1917. . . . We also have held that the word 'physician' and the word 'surgeon' when disassociated from any qualifying word or clause does not include osteopathic physicians or surgeons. . . .

"It will be observed that those who receive licenses to practice the arts of healing or the treating of diseases for

bodily disorders are not permitted to advertise by the use of the word 'physician' or 'surgeon' standing alone, which, of course, clearly indicates that when the legislature uses these words without qualification they must mean the kind of a physician or surgeon contemplated by section 10008, Tem. Comp. Stat. et seq., which has to do solely with those of the old school. . . .

"We do not mean by this opinion to say that the department can under no condition pay these more limited practitioners for medical or surgical care and treatment, because, they, like those practicing dentistry, chiropody, optometry and so on, may render valuable service."

INFORMATION AND STATISTICS

RAY G. HULBURT, Director

ATTENTION, MODERN WOODMEN!

The Director of Information still wants the names of all osteopathic physicians who are members of the Modern Woodmen. It would also be useful to know who have friends and patients in that organization.

CENTRAL OFFICE PUBLICITY COOPERATION

A worker from the Central office had charge of the publicity for the New York State convention in November, as mentioned in the December JOURNAL. In addition to the space secured in the local newspapers, there are clippings in hand as follows:

Clippings from ten states, the District of Columbia and Canada;

Clippings from twenty-nine cities in New York, and eleven outside:

From forty-six papers in New York and eleven outside.

Multiplying each clipping by the circulation of the paper in which it appeared, gives a total circulation outside of Utica, in New York state, of 2,849,877; outside New York, of 496,710.

The Art of Practice

HAROLD I. MAGOUN, Chairman
16-17 Weller Bldg., Scottsbluff, Nebr.

LITTLE NICETIES THAT PATIENTS APPRECIATE

Do you keep your office spic and span and as clean as any patient's home?

Do you have flowers on the table in the waiting room?

Do you always have clean linen and clean kimonas and clean pillow covers?

Do you always have sterile combs in wax paper envelopes ready for each?

Is your office cheery and warm and well ventilated?

Do you remember birthdays of babies you have delivered?

Do you always inquire and send a letter of thanks for referred patients?

Do you send flowers and express sympathy when death has intervened despite your best efforts?

Do you send the OSTEOPATHIC MAGAZINE to all who might be interested?

Do you occasionally mail out a special letter to patients calling attention to some feature in the O. M.?

Do you, on occasion, use the public press for public information as suggesting means of avoiding the flu?

Are you always glad to address gatherings and talk on health subjects without necessarily mentioning osteopathy?

Does your secretary think to help this one on with her coat or call a taxi for that one?

Do you make a special effort to furnish information about diet or therapeutic lamps or special window glass or whatnot for the anxious mother?

Are you thinking of these and a thousand other little things which make the difference between mediocrity and success?

Now write us your specialties along these lines.

A. O. A. Officers for 1928-1929

President—D. L. Clark, Denver, Colo.
Past President—George V. Webster, Carthage, N. Y.
First Vice President—John A. MacDonald, Boston, Mass.
Second Vice President—F. C. Hopkins, Hannibal, Mo.
Third Vice President—Anna E. Northup, Moose Jaw, Sask., Canada.
Secretary-Treasurer and Editor—C. J. Gaddis, Chicago.
Business Manager—Clayton N. Clark, Chicago.
Information and Statistics—Ray G. Hulburt, Chicago.
Executive Council—D. L. Clark, G. V. Webster, John A. MacDonald, R. B. Gilmour, Hubert Pocock, C. J. Gaddis.

TRUSTEES

Term Expires 1929

Victor W. Purdy, Milwaukee, Wis.
Hubert Pocock, Toronto, Ont., Canada.
Canada Wendell, Peoria, Ill.
Roberta Wimer-Ford, Seattle, Wash.
Josephine L. Peirce, Lima, Ohio (fills unexpired term of John A. MacDonald).

Term Expires 1930

R. H. Singleton, Cleveland, Ohio.
George M. Laughlin, Kirksville, Mo.
A. D. Becker, Kirksville, Mo.
E. C. Brann, Wichita, Kans.
Warren B. Davis, Long Beach, Calif.

Term Expires 1931

Arthur E. Allen, Minneapolis, Minn.
Phil R. Russell, Fort Worth, Texas.
Ray B. Gilmour, Sioux City, Iowa.
Louis C. Chandler, Los Angeles, Calif.
E. A. Ward, Saginaw, Mich.

DEPARTMENT OF PROFESSIONAL AFFAIRS

Ray B. Gilmour, Chairman, Sioux City, Iowa

Bureaus of Colleges and Professional Education—Ray B. Gilmour, Sioux City, Iowa.
Bureau of Hospitals—A. D. Becker, Kirksville, Mo.
Bureau of Associate Editors—John A. MacDonald, Boston, Mass.
Warren B. Davis, Long Beach, Calif.
Josephine L. Peirce, Lima, Ohio.
H. L. Collins, Chicago.
S. V. Robuck, Chicago.
Earl R. Hoskins, Chicago.
Bureau of Censorship—Roberta Wimer-Ford, Seattle, Wash.
Bureau of Professional Development—John E. Rogers, Oshkosh, Wis.
Bureau of Convention Program—Chester H. Morris, Chicago.
Committee on Credentials—Canada Wendell, Peoria, Ill.
Committee on American Osteopathic Foundation—R. H. Singleton, Cleveland, Ohio.

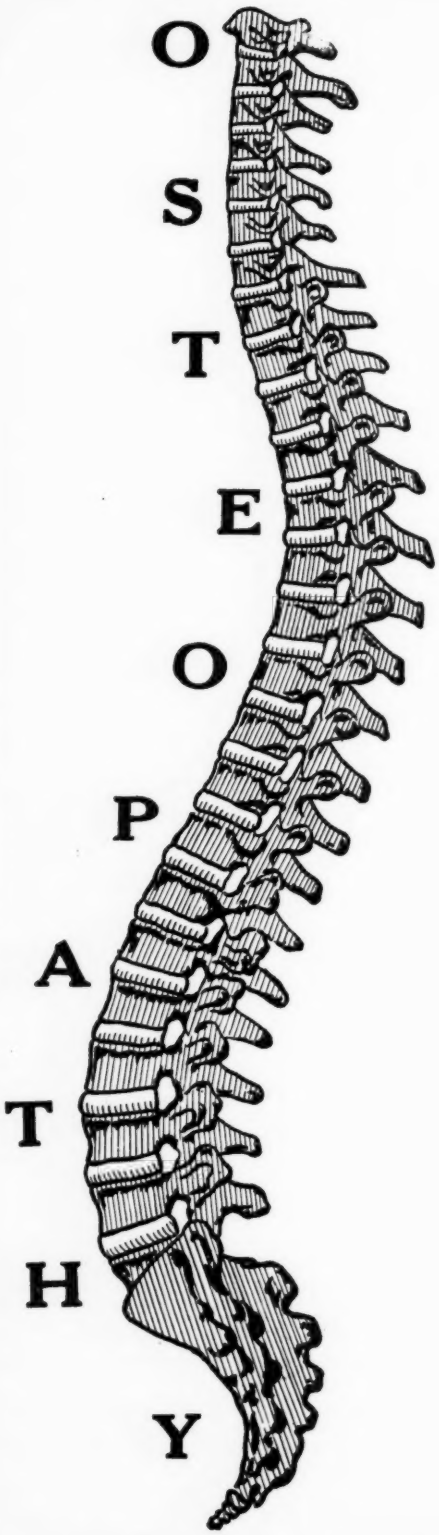
DEPARTMENT OF PUBLIC AFFAIRS

Hubert Pocock, Chairman, Toronto, Ont., Canada

Bureau of Industrial and Institutional Service—E. A. Ward, Saginaw, Mich.
Bureau of Clinics—Victor W. Purdy, Milwaukee, Wis.
Bureau of Public Health and Education—Arthur E. Allen, Minneapolis, Minn.
Committee on National Affairs—C. B. Atzen, Omaha, Nebr.
Legislative Adviser in State Affairs—Asa Willard, Missoula, Mont.
Committee on Osteopathic Exhibits—E. C. Brann, Wichita, Kans.
Committee on Osteopathic Exhibits in National Museum—Riley D. Moore, Washington, D. C.
Director of Information and Statistics—Ray G. Hulburt, Chicago.

The O. M. makes for Health, Efficiency and Prosperity in your Community. See that every member of your section of the community gets it.

THE O. M. MAILS FOR ONE CENT



Members of the

AMERICAN OSTEOPATHIC ASSOCIATION

observe

NORMAL SPINE WEEK

March 17-23

The importance of the spine, in health or ill health, is hard to overestimate.

The spine needs proper care just as much as the heart or the lungs or other vital parts.

Take this opportunity to have your spine examined by an expert who understands the human body as a piece of running mechanism.

WATCH THE PAPERS FOR ANNOUNCEMENTS

Cut this out and display it on door or window.

Current Medical Literature

EARL R. HOSKINS, Director
17 N. State St., Chicago

American Journal of Obstetrics and Gynecology
St. Louis

XVI: 611-764 (November) 1928

ABSTRACTED BY ALBERT C. JOHNSON
1001 Huron Road, Cleveland, O.

Premarital Examination as Routine Preventive Gynecology, Robt. Latou Dickinson, M.D., F.A.C.S., New York City.

Examination for fitness has become customary for all occupations save marriage and parenthood. The author urges development of a public opinion in favor of routine consultation on major physical defects and psychic inhibitions before the announcement of an engagement, followed by a general and local examination of both bride and groom a month or more before the wedding day.

He discusses in detail the examinations to be made and the advice to be given both persons, and the treatment that is of value for the various abnormalities, both physical and mental, that are brought out by the examinations.

Instruction in methods for the prevention of conception is given in many instances.

The Treatment of Cervicitis, Particularly by the Cautery and Operation. Frederick C. Holden, M.D., F.A.C.S., New York.

The author believes that office treatment of cervicitis, especially by the cautery, should be used in the virgin; between labors; at or near the menopause; in cervicitis of the cystic variety; the form accompanied by polyps; in the obstinate gonorrheal infections, and erosions with precancerous suggestion.

The office treatment should be used more often before operation to lessen the amount of surgery to be done.

The cautery treatment is not indicated in those patients who need other local operative procedures, such as repair of perineal lacerations, etc.

Erosions in the virgin cervix usually respond in from two to four treatments at two to three week intervals.

Between labors, the cautery treatment is nearly ideal for healing cervicitis. If the woman is through having children, operation may or may not be indicated.

In senile cervicitis the cautery, along with dilatation, appears to be the best treatment.

Cervicitis with cyst formation does not often justify operation unless other operative procedures are necessary.

In chronic gonorrhea, the author is convinced that no method of treatment compares with the cautery. The cautery is not used in the acute stage, nor in women with tender tubes.

For the prevention of cancer, simple treatment with silver nitrate, 5 to 15% solution, or with full strength pyroligneous acid will usually suffice for the mild erosions. But the cautery is needed for cystic or granular conditions.

The cautery equipment necessary for treatment of the cervix is that usually used by rhinologists—the delicate narrow platinum loop, and the spiral tip.

The hot wire is applied to the posterior lip first. The platinum loop should burn to a depth of 2 to 5 mm., which is the thickness of the mucous membrane. Treatments are given at two week intervals.

The Surgical Treatment of Sterility with Particular Reference to Salpingostomy—William Kerwin, M.D., St. Louis, Mo.

The operation of salpingostomy, which in the past has not met with universal acclaim, is recommended by the author as giving successful results in 25% of his cases operated and successfully followed.

Several conditions must be favorable before the operation is done—

1. The husband must be in perfect condition for procreation.
2. The patient should be under 35 years of age.
3. There should be no infantilism or other dysfunction of ductless glands.
4. There should be no acute pelvic inflammation.
5. Tuberculosis of the tubes should be treated by removal, and other chronic inflammations should have careful preoperative treatment.

All patients are submitted to the Rubin test. At operation the tube is carefully handled. Further operative technic depends upon the type of occlusion.

When the fimbriæ are invaginated into the lumen of the tube, the constriction is stretched gently and bluntly, using the handle of the knife or the closed Mayo scissors, thus enabling the imprisoned fimbriæ to slip outward.

In the second type, where all signs of the fimbriæ are obliterated, a 2 cm. longitudinal incision is made into the lumen, the flaps are everted and fastened with four interrupted sutures of No. 00 twenty-day catgut, to the serosa of the tube. All bleeders are ligated with plain No. 00 gut, and care is taken to not produce fresh bleeding in sewing the flaps. Before the flaps are sewn, the patency of the uterine end of the tube is ascertained by means of air inflation, using a soft rubber ear syringe.

Two or three strands of thin catgut are pushed into the lumen of the tube. These strands are about 2 inches long and their ends protrude about ½ inch out of the newly formed opening.

Two weeks following operation, the patency of the tube is tested with the Rubin test. The test is repeated two or three times at bi-weekly or monthly intervals.

The American Journal of Physiology
Baltimore, Md.

Vol. LXXXVII (December) 1928

Abstracted by R. N. MACBAIN
25 E. Washington St., Chicago

Further Observations on Decrement in Nerve Conduction. D. J. Edwards and McKeen Cattell (p. 359).

Since Keith Lucas and Adrian made their observations on the conduction of the nerve impulse, the nature of its conduction and influencing factors have come in for much consideration.

The influence of an area of decrement (an area of increased resistance to the passage of the nervous impulse) is an important factor in determining the nature of the transmission of a nervous impulse. A decrement is thought to be produced experimentally by narcotising an area of nerve by CO_2, alcohol, ether, or by pressure. It is still an open question whether or not there is an area of decrement produced wherein the nerve impulse is stepped down by degrees as it encounters the resistance. The other hypothesis is that the metabolism of a nerve fibre is altered in mass and that the nerve impulse passes through at a uniform, but much reduced intensity.

The authors have published previous experiments, giving results which they have interpreted as pointing to the presence of an area of decrement in an anesthetized nerve. In this paper they confirm their findings with an improved technic. They are dealing here with pressure anesthesia.

Differences in the Bile from the Two Sides of the Liver. Glover H. Copher, Bruce Dick and Irene Koechig.

SUMMARY

"The relative output, physical character, pigment, ash and total solid in the bile, which was collected over a period of forty-eight hours after operation, from the right and left sides of the liver of the dog have been studied. The right side of the liver produced a greater volume of bile per gram of liver tissue than the left; however, the left lobe produced a more concentrated bile than the right lobe. The pigment concentration in the bile from the left side of the liver was considerably greater than that from the right side."

Ultraviolet Wave Lengths Valuable in the Cure of Rickets in Chickens. George H. Maughan.

SUMMARY

"A comparison of different wave lengths as to their power to cure rickets, was made by using glass filters capable of absorbing different quantities of the shorter ultraviolet.

After producing rickets in 125 chickens the flock was culled, eliminating the least rachitic and those most affected.

Ten groups containing approximately ten chickens in a group were thus obtained. With these the test was conducted.

Those wave lengths effective in the cure of rickets are in the region between 3130A and 2650A. Those shorter than 2896A seem, from our work, to be relatively weak in this respect; and line 3130A seems to have no curative value.

"Careful analysis of the data of this experiment seems to prove conclusively that wave lengths 2968A are the most potent in the cure of rickets and that line 3024A is, perhaps, one-fourth as effective."

Archives of Pathology, Chicago

Vol. 6, No. 6

Abstracted by P. V. ALLEN

Kahn Bldg., Indianapolis, Ind.

The Defensive and Metabolic Apparatus of the Lungs. B. M. Fried, M.D. (p. 1008).

As early as 1867 it was pointed out by Fort that there was some similarity between the lungs and glands. The lungs also play a role in the metabolism of lipoids. Bacteria and foreign cellular elements finding their way to the lungs are phagocytized, and destroyed there. Changes occur in the pulmonary parenchyma in various immunifacient and anaphylactic processes. An important element in the organism's establishment of immunity as well as in its metabolic processes is the macrophage; a cellular element found in the lungs as well as in many other localities; and demonstrated as reported in this article to have been derived in situ from the mesenchymal tissues of the lungs themselves. The so-called epithelium lining the alveoli is not epithelium at all but consists of pluripotential mesenchymal cells of a type which also exists in the peribronchial and perivascular connective tissue. These cells play a role in immunity, in infection, and in the metabolism of various substances, thus representing a defensive and metabolic apparatus of the organism; and furthermore, possibly possessing properties of internal secretion. Then cells, stimulated experimentally by dyes and oils, proliferate and separate from the alveolar wall forming the intra-alveolar "inflammatory exudate, dust cells or heart-failure cells."

Carcinomas of the Uterine Cervix. Wm. C. Hueper (p. 1064).

"An attempt was made to determine the potential malignancy of carcinomas of the uterine cervix through an evaluation of twenty different histologic factors pertaining to the parenchyma and stroma of these tumors. These evaluations are expressed in numerical values which represent an accurate numerical description of the histologic structure of the tissue examined; and the sum of which is called the "histologic malignancy index."

The prognosis varies inversely with the height of the index. Additional factors have necessitated the use of "clinical malignancy index." Well defined standards are introduced which make possible duplication by other workers and which eliminate to a large extent the influence of personal experience and interpretation. Obviously a review of this article in sufficient detail to make it intelligible would require more space than such a highly specialized subject deserves here, so we would suggest that the few readers who are interested refer to the original article.

Experimental Hypotension in Rabbits (p. 1103).

Bacterial cultures made from the apexes of extracted teeth, from tonsils and from prostatic secretions, and injected into the marrow cavity of the tibia, into the knee joint, or intravenously, in rabbits produced a significant fall in blood pressure in a large percentage of rabbits injected with cultures obtained from patients with systolic blood pressure below 110, while cultures from patients with normal blood pressures did not cause significant changes in the blood pressure in injected animals.

NORMAL SPINE WEEK

A great opportunity for community service and professional progress.

American Osteopathic Society of Ophthalmology and Otolaryngology

JEROME M. WATTERS, Editor

23 James St., Newark, N. J.

DEAFNESS*

J. D. EDWARDS, D.O.

The aim of this communication is to give a short and practical account of osteopathic surgery and finger surgery in the management of deafness, and while it is especially intended for those who have not had the opportunity of devoting much time to the subject, I hope that it may be of some service to the more experienced practitioner.

Deafness may be divided into two general classifications, namely, acquired and congenital. There are two kinds of acquired deafness: conduction and perception. The consensus of opinion now is that congenital deafness is due to arrested development, and not to maldevelopment or absence of the end organ as thought heretofore. The subdivisions and differentiation of partimutism will be discussed in the closing paragraphs of this paper.

Conduction Deafness:—It is essential that the examiner have in mind the portions of the auditory apparatus entering into this type of deafness: eustachian canal, tympanum, ossicular chain, tympanic membranes (outer and inner drumhead), and the external auditory meatus. Conduction deafness may be divided into three classes: obstructive, fixative and degenerative; or, more specifically, eustachian obstruction, ossicular fixation and progressive deterioration of the sound receiving chambers.

Etiology of Conductive Deafness:—In the management of this type of auditory impairment the following causative factors may be considered: focal infection—diseases of the accessory sinuses; post-nasal drippings affecting the eustachian orifice; septal deviation; spurs, ridges, enlarged turbinate bones and nasal polyps producing "Pocket Handkerchief Deafness." Leading authorities have agreed that ninety percent of so-called catarrhal deafness is due to nasal obstruction and the patient not knowing how to blow his nose properly. This type of deafness was classified by the Mayo Clinic.

Silent Antrum:—Only a small percentage of maxillary sinusitis is diagnosed early; most antrum infections continue for years; many are never discovered. Part or all of the classical symptoms may be absent; most antral infections will be found only by careful search. Laboratory experiments have demonstrated conclusively that the calcium content of pus is always greater in bone suppuration than in sepsis in the soft tissues. I have treated surgically a great many diseased antrums in which the x-ray report was negative, but transillumination showed a slight, and in some instances, a marked, cloudiness. In these conditions soluble pus was obtained by exploratory lavage, demonstrating the presence of soft tissue sepsis. This may be applied to all of the accessory sinuses and if the subjective and clinical symptoms are distinctly positive, surgical treatment of the sinus is legitimate, regardless of the x-ray findings.

Vacuum Eustachian Salpingitis:—Septal deflection and enlarged turbinate bones, particularly the turbinate body (posterior portion of the inferior turbinal), may produce a rarefaction of air at the eustachian opening and edematous orifice, thereby obstructing ventilation and drainage of the canal. The enlargement of the turbinate body may be diagnosed by posterior rhinoscopy or examination of the nasopharynx with the index finger.

Adenoid Deafness:—Lateral adenoids within the eustachian orifice and fossa of Rosenmueller are very common causative factors of deafness in the early period. These vegetative growths are often overlooked during an adenoidectomy. Remnants of adenoids interfering with the function of the tube tonsil of Gerlach (epiglottis of the orifice) and tubal musculature are also very common lesions in adolescence and adult life.

Malalignment of the Orifice:—The lower angle of the eustachian canal passes through soft tissue for about one inch. Prolapse of the orifice and any version may be possible because of pathological changes in the walls of the nasopharynx.

Membranous Thickening of the Canal:—This condition may follow chronic purulent otitis media (OMPC) caused by

*Read at the convention of the American Osteopathic Association, section program, Kirksville, 1928.

a prolonged suppurative process in the middle ear draining into the eustachian tube. A dry ear with a sunken drumhead, with a history of O M P C, may be materially benefited by the insertion of whalebone bougies, thereby disturbing the synechia (adhesions) and restoring ventilation of the tympanum.

Waterlogged Tube:—A swelling of the membranous and cartilaginous portions of the canal is often due to lymph stasis. The deafness in such a condition is almost instantly materially benefited by finger surgery of the orifice and fossa of Rosenmueller. This explains the spectacular results obtained by operators at the osteopathic clinics in the treatment of the first stage of conductive deafness.

Thickening of the Drumhead:—The outer layer of the tympanic membrane is a reflection of the walls of the external auditory meatus. The drumhead has three layers, the inner mucous, the middle fibrous, and the outer dermal layer. Diseases of the external canal may affect the outer layer of the drumhead, particularly eczema, furunculosis, and osseous growths (exostosis and hyperostosis). Tinnitus aurium (head noises) and conduction deafness have, in many cases, been improved to a great extent by proper treatment of the external auditory canal.

Ossicular Fixation:—Siegel's otoscope with bulb attachment may show the malleus to be movable but this does not exclude fixation of the stapes in the oval window. If 64 fork is not heard, and forks 128 and 256 are Rinne negative, one may readily conclude that the stapes is anchored in the foramina ovalis (ankylosis of the stapes). The writer supplements Gelle's test with the above forks to determine ossicular fixation. The insertion of a whalebone bougie has, in a number of instances, released the ankylosis of the stapes. The olive-tipped bougies apparently broke up the fixation of the chain by disturbing the synechia. One may watch the excursions of the olive-tipped bougie with the otoscope, and easily see the manipulations of the ossicular chain.

Tensor Tympani Muscle:—Leading authorities have agreed that the tensor tympani muscle governs intralabyrinth pressure and normalcy of the drumhead. The writer was the first to discover the importance of this muscle in the management of conduction deafness. This was reported in a paper at the National Convention, Philadelphia, 1915, and antedates medical literature discussing this muscle ten years. The consensus of opinion is that irritation of the tensor tympani will cause contraction, thereby causing retraction of the drumskin (tympanic membrane), and conduction deafness. The large belly of this muscle has its origin in the tube tonsil of Gerlach at the eustachian pharyngeal orifice, and its insertion at the handle of the malleus. Bearing in mind this anatomical relationship, one can see that osteopathic finger surgery of the eustachian orifice and fossa of Rosenmueller is a logical treatment for fixative deafness.

Soft Palate:—Distortion, contraction, shortening and malalignment are common lesions in conduction deafness and are often overlooked by the practitioner. It is essential that the soft palate be free from untoward results following a tonsillectomy. The function of the eustachian orifice is entirely dependent upon the normal functional activity of the tubal musculature, namely, the tensor palati, which, aided by the salpingo-pharyngeus, opens the tube, and the levator palati which closes the pharyngeal orifice. These muscles have their origin in the eustachian tube and their insertion in the soft palate. Finger manipulation of the soft palate (springing it downward and forward) has, in a number of instances, benefited conduction deafness. The osteopathic surgeon is very careful to see that the soft palate is not injured during a tonsillectomy, and is functioning normally when the case is dismissed. I have numerous case reports in which the onset of the deafness followed a tonsillectomy by a so-called regular general surgeon. Finger surgery of the eustachian orifice and soft palate worked wonders in these patients.

A very common lesion is the so-called "plumber's trap" at the orifice. In brief, the marked contraction of the musculature portion of the soft palate produces a recess at the mouth of the tube which is filled by exudates and mucous plugs, interfering with ventilation of the canal and middle ear. These patients are always hawking and digging at their ears. Soft palate manipulation is the treatment par excellence for this condition.

Perforation of the Drumskin:—It was thought heretofore that perforation of the tympanic membrane discouraged the treatment of deafness. Many patients, with a lower two quadrant perforation, have been greatly improved by finger surgery of the pharyngeal orifice of the eustachian canal which released the irritation and impingement of the tensor tympani muscle. The abnormal contraction of this muscle plunged the stapes into the labyrinth, thereby increasing intra-labyrinth pressure and producing deafness as a sequella (fixative deafness). Furthermore, local treatment of the tensor tympani may break up fixation of the ossicular chain.

Foreign Bodies in the External Canal:—A writer once said that the removal of a foreign body by a bunglesome operator will do more harm to the auditory apparatus than the foreign body will itself. Furunculosis, myringitis and perforation of the drumhead are common untoward results at the hands of an unskilful operator. Moreover, it is advisable never to promise a patient to improve his hearing by the removal of impacted cerumen or a foreign body. Perforation of the drumskin may be closed and over-relaxation of the drumhead taken up by the foreign body, and the extraction would impair the auditory function instead of improving it. It is essential that functional tests with tuning forks be made before and after the removal of a foreign body, as a protective medium and medico-legal record.

Reflex Labyrinthitis:—A low degree of deafness and tinnitus aurium (head-noises) may be due to a cheesy tonsil. The removal of a tonsillar plug has, in a number of instances, improved the hearing. Likewise a low degree chronic tonsillitis treated with the tonsillarvac (evacuation tubes) obtained almost instant relief from distressing auditory symptoms.

Tic Salpingitis:—Audible tinnitus is often due to a tic of the throat muscles—eustachian walls meeting and separating. Finger surgery of the eustachian orifice and deep relaxation of the submaxillary and hyoid region are the treatment of choice.

Structural Lesions:—I have yet to meet a patient without either an upper dorsal or upper cervical osteopathic lesion. The correction of these lesions is essential in order to support the local treatment. Massage of the throat muscles and deep occipital tissues is strongly advocated by leading medical authorities. Mueller of Carlsbad teaches his patients how to manipulate and deeply massage the external ear and throat muscles, three times a day, two hundred strokes each time. They return to America very much sold on this manipulative method as a supportive measure.

Whalebone Bougie Manipulation:—Forcible and graduated bougie manipulations are rarely necessary in the management of conductive deafness. The traumatism of the canal disturbs the cilia and produces secondary synechia. Over ninety percent of the strictures are at the orifice and lower angle of the tube, and these may easily be treated with osteopathic finger surgery. No. 1 and No. 2 whalebone bougies, lubricated and gently inserted, may be used to clear adhesions at the isthmus and osseous portion of the canal and to break up ossicular fixation. The middle ear, however, should not be inflated immediately following the insertion of the bougies, in order to avoid otitis media.

Forcible Inflation:—The replacement of a sunken or retracted tympanic membrane by forcible inflation with compressed air is an illogical procedure. Prolonged treatment of this kind will, in time, produce over-relaxation of the drumskin. This is one reason why the patient should be warned against practicing Valsalva's method—pinching his nose and blowing out his ears to improve the hearing temporarily. Normalization of the eustachian canal and tensor tympani muscle with finger surgery will restore the normal position of the membrani tympani and ossicular chain.

Mild Anemia:—A hemoglobin count of sixty to seventy is very common in conduction deafness. Elimination of focal infection in any part of the body, dietetic survey, and proper blood treatment are essential in these conditions to obtain good results. These cases, however, are usually mixed deafness (middle ear and labyrinth involvement).

Digital Dilatation:—Osteopathic finger surgery of the eustachian orifice has three properties, namely, (1) mild inflation of the middle ear; (2) surgical shock to the tensor tympani muscle, which governs the ossicular chain and intralabyrinth pressure; (3) surgical shock to the vasoconstrictors, thereby normalizing the tonicity of the canal and tubal musculature.

Hereditary Deafness:—Hereditary influence lowers the resistance of the auditory apparatus, but this should not interfere with the management of the case. Merely because a child is born of a tubercular parent does not mean that the child must die of T. B. I contend that proper treatment will arrest the progress of the auditory impairment and hereditary cycle; I have studied this in a number of families. The examiner

should have before his mind's eye the one hundred and one causative factors of deafness, and be qualified to arrive at his diagnosis by the process of elimination or exclusion. A writer once said that a case properly diagnosed is half cured.

PERCEPTION DEAFNESS

There are two kinds of perception deafness, intralabyrinth and central. In the management of labyrinthitis, or so-called disease of the end organ, the subadjoined causative factors should be excluded:

Tinnitus combined with a mild degree of deafness may be due to a tonsillar plug as well as to low and high blood pressure.

Vertigo may be a result of constipation and cardiovascular disturbance, and this should be differentiated from a true labyrinthitis. Functional tests with tuning forks will determine the situation. In true labyrinthitis the ears are extremely sensitive to the application of the tuning forks, especially in the high scale.

Sensitive or missing tuning forks are characteristic of a toxic labyrinth, which may come from focal infection in either the upper or lower orifices.

A normal drumhead, with a red reflection which may be seen through the tympanic membrane, and markedly increased bone conduction are always diagnostic of otosclerosis. The red reflection is due to hyperemia of the outer wall of the labyrinth which is seen through the transparent drumskin.

Otosclerosis occurs frequently in the female, the deafness being considerably worse during the menstrual period and menopause.

The deafness in otosclerosis is always made worse by excessive vibrations as produced by headphones, electrophones and the audion bulb method of treatment. These instruments are contra-indicated and may cause alterations within the labyrinth, breaking down of the osseous structure.

Proper treatment of the endocrines with glandular therapy is very beneficial in otosclerosis, especially during the menopause. The administration of hormotones quiets the tinnitus aurium and materially helps to dissipate the intralabyrinth congestion. In otosclerosis fixation of the stapes may be neutralized by resection of the lower two quadrants of the tympanic membrane. This will allow sound impulses to reach the walls of the middle ear, especially the outer wall of the labyrinth. This conservative surgical intervention, however, is a treatment of the last resort and has, in many instances, restored thirty-five to sixty-five per cent of the auditory function.

Osteopathic finger surgery of the eustachian orifice has, in many cases, brought considerable relief in otosclerosis. I have always concluded that the surgical shock to the tensor tympani muscle disturbs the partial fixation of the stapes in the oval window. I never hesitate to use this treatment of the pharyngeal orifice of the tube in the management of otosclerosis, but the prognosis is always guarded.

The consensus of opinion is that otosclerosis is due to focal infection somewhere in the body—a rheumatic diathesis. I accept this conclusion as I have yet to examine a case without focal infection in either the upper or lower orifices.

Many cases of otosclerosis have been materially benefited by cooperative treatment of the gynecologist and the aurist. Cystic ovaries and so-called pus tubes are common gynecological reports in this condition. One case in particular, age twenty, required a hysterectomy to relieve the distressing head noises and deafness. Both ovaries were cystic and dangerously enlarged; during the menstruation this patient was practically totally deaf with a very noticeable flushing over cheeks and base of the neck. There was also a marked injection over the malleus during the menstrual period. This patient is now free from tinnitus aurium and the hearing has improved about seventy-five per cent. Endocrinology having failed, laparoscopy was advised, and the results obtained are more than gratifying. Infantile uterus and sensitive ovaries are very common in otosclerosis.

Apical and peridental abscesses and diseases of the alveoli process are common factors in the etiology of deafness. Likewise impacted third molars and supernumerary teeth are often contributory factors in auditory impairment.

One should be qualified to differentiate Meniere's disease and Meniere's symptom complex. In the former, the onset of the deafness is sudden with no history of previous deafness or chronic catarrh and the tympanic membrane is in normal position and of normal consistency; whereas, in the latter, there is a history of chronic deafness and the drumhead is sunken or retracted, indicative of progressive conduction deafness. The vertigo may be as severe in both conditions, and this often misleads the practitioner, especially the tyro in otology. In Meniere's disease the deafness is due to an inflammatory process and congestion of the auditory and static labyrinth—hemorrhagic labyrinthitis. In Meniere's symptom complex the marked vertigo and increased deafness are due to a sudden hyperemia of the labyrinth and are usually met with in the latter stages of middle ear catarrh, when the stapes has become firmly fixed by means of adhesions to the margin of the fenestra ovalis.

A sudden onset of deafness with markedly lowered bone conduction and no previous history of auditory impairment is often due to lues. A Wasserman will determine this and the usual syphilitic treatment will restore a great percentage of the hearing. Perforations of the nasal septum are very common in these cases. The tympanic membrane is normal in every respect, and this alone excludes conduction deafness.

If the drumhead (tympanic membrane) is in normal position and of normal consistency, and the otalgia is obscure in its origin, the deafness may be due to reflex labyrinthitis. One should look for cervical adenitis pressing on the vagi, furunculosis of the external auditory meatus, herpes of the facial nerve, growths on the gums, cancer of the larynx, and impacted teeth.

CONGENITAL DEAFNESS

At the national convention of the League of the Hard of Hearing, St. Louis, 1928, the consensus of opinion was that if a child showed the least fragment of hearing it should be treated. Every cell in the body passes through a complete change within three years, and the body as a whole within seven years. On this basis, proper treatment and nerve re-education may reclaim a great percentage of the partimutes or so-called deafmutes now being taught lip reading.

A speaker, discussing progressive deafness, stated that its cure and prevention can only be mastered when the inception and pre-inception periods are understood. Furthermore, there is no such thing as an ordinary cold. Every head cold means a sinusitis in some form, and proper treatment of the sinus involvement is the master key to the management of progressive deafness.

Two of the biggest unsolved problems of preventive medicine today are those of cancer and otosclerosis (hardening of the labyrinth). Over two million people in the United States today are suffering from otosclerosis. Dr. Hayden, treasurer of the A. M. A., begged for postmortem material. The otologists today are asking not "Lend me your ears," but "Will me your ears," Dr. Hayden said. So far, only six persons have willed themselves to the Society. This is due to religious prejudice. The American Otological Society recently received several million dollars for research work, and this will be used to study congenital and acquired deafness.

In the management of congenital deafness the following causative factors may be considered:

Fixation of the Malleus:—The ear of the infant is provided with the process gracilis firmly anchored in Glaser's fissure. This anchor of the malleus prevents vibrations passing to the delicate inner ear. A speedy absorption of the process gracilis takes place at birth, and it becomes a flexible hinge through its replacement by a ligament attachment. Deafness in the early period may be due to retardation of this absorption process.

Thickened Drumhead:—More important still is the observation that the infant drumskin is approximately ten times as thick as that of the adult, the thinning process being a part of normal development. Otoscopic examination of adult mutes frequently discloses that the drumskin still contains thickened patches and other indications of arrested development. Any such unbalancing of a delicately responsive diaphragm causes damping. It would appear that congenital deafmutism is in comparatively few instances due to malformation or absence of the end organs of hearing. It seems more reasonable, in fact,

to class this condition as arrested development of the hearing organs after birth.

Embryonal Tissue:—The middle ear, attic and antrum in the infant are filled with embryonal tissue resembling granulation tissue in structure. Absorption of this tissue begins at birth but is not completed until the end of the first or second year. I believe that retardation of this absorption process is a big factor in the etiology of partimutism, or so-called deafmutism.

Leading otologists are now giving more time to the study of these absorption processes in the infant, since the latest investigations show that ten per cent of the school children in the United States are deaf. One writer stated that it takes an enthusiast to put over work of this kind. Very few young otologists are enthusiastic over this work. They want to do mastoid operations and various other forms of surgery. We must realize that if we can cure deafness in the early period, we are accomplishing much for a patient's later life.

Fetal Membrane:—In my communication to THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION, April, 1924, I discussed the probability of fetal membranes obstructing the eustachian canal, interfering with ventilation of the middle ear. The function of these membranes, I concluded, is to keep the amniotic fluid from reaching the middle ear while the child is in utero. The ophthalmologist is acquainted with the fact that a similar membrane protects the nasal sac and ruptures shortly after birth (congenital dacryocystitis). I have since demonstrated the treatment of delayed canalization of the eustachian tube in various osteopathic clinics, and the results obtained have been very gratifying.

In this same article I also showed, with illustrations by Dr. F. P. Millard, the probability of fixation of the tube tonsil by congenital adhesions, congenital synechia within the osseous portion of the eustachian canal, congenital web at the pharyngeal orifice, fetal membrane or embryonal tissue obstructing the tympanic orifice of the tube, fixation of the stapes by impaction of the embryonal tissue in the tympanum, and lateral adenoids or vegetative growths within the fossa of Rosenmueller interfering with the function of the tubercle of Gerlach (epiglottis of the tube). If the reader is interested in the treatment of the partimute or so-called deafmute, he may obtain reprints of these articles, April, 1924, and August, 1925, by communicating with the writer.

In the treatment of the partimute, I attempt to excite and re-establish the absorption process of the embryonal tissue and process of gracilis with bougie manipulation. In these conditions ventilation and drainage of the tympanum can be restored only by the insertion of a whalebone bougie through the eustachian tube to the middle ear. Fetal membranes and congenital adhesions thereby are excluded, and this technic is, of course, administered under ether anesthesia and followed immediately by finger surgery of the lateral adenoids at the pharyngeal orifice and fossa of Rosenmueller.

Chemical Building, St. Louis, Mo.

American College of Osteopathic Surgeons

ALBERT C. JOHNSON, Editor
1001 Huron Road, Cleveland, Ohio

FOCAL INFECTION

H. L. COLLINS, D.O.

The more I learn of the practice of the healing art, the more I admire the healing power of Nature.

While I respect and honor the work that osteopathic internists and surgeons are doing for the good of humanity, the lack of correlation between the two seems deplorable. We surgeons and internists are doing our utmost, but too often independently. After all, we can only offer assistance in the natural processes of healing. Our combined resources are often meager enough and should always be pooled for the benefit of the patient. There should be no conflict of interest for we are aiming at a common end.

Most diseases are self-limited—cured by Nature; her's are the secrets that we must learn if we are to be of aid. Many thousands of lives, without a doubt, have been saved in the past generation because of our partial knowledge of these secrets.

Chronic disease represents Nature's failure to effect a cure. Its onset and course are at times so insidious that it escapes even the patient's notice until grave danger threatens.

By knowing the ills that flesh is heir to, by knowing Nature's methods, we can prevent disease, and by intelligent aid often cure it.

We are all more or less familiar with the fact that heredity, environment, diet, exercise, etc., may play important parts in the causation of disease, but I will not undertake a lengthy discussion of this phase of the subject.

What I do wish to draw your attention to is one of the most frequently encountered early manifestations of a disease condition—prompt discovery and eradication of which prolongs life and promotes health. I refer to focal infection, which like a thief in the night lies in wait to attack the unwary, and sometimes with disastrous effect. The internist or general practitioner has an opportunity to discover these conditions first. Often the surgeon does not see them until extensive ravages on the patient's body have occurred as a result of these neglected infections.

LOCATION

Foci of infection may occur in almost any tissue of the body, but their sites of predilection are the teeth, tonsils sinuses, gall-bladder, gastro-intestinal tract, pelvis of the kidney, seminal vesicles and prostate in man, fallopian tubes, and cervix in women. Though other structures may be the seat of infection, they are usually involved secondarily to some of those just mentioned.

I shall limit my remarks to a brief mention of a few points of interest regarding those types of focal infection most commonly encountered.

TEETH

All devitalized teeth afford fertile soil for bacterial propagation. A roentgen-ray examination of these devitalized teeth is valuable if positive evidence of infection is demonstrated; but if it isn't, there is no proof that infection is absent. Some of the most troublesome tooth infections, producing the greatest systemic disturbances, have not been revealed by x-ray investigation. Yet when these devitalized teeth have been extracted, macroscopic and microscopic examinations have proved infection present—the patient's improvement following the extraction is also evidence of the pre-existing infection.

TONSILS

The prevalence of tonsillar infection is considered by some to be exaggerated, but careful and painstaking study for a period of fifteen years has convinced me that such is not the case. The ever-existing danger to these patients, where the presence of the infection is ignored or overlooked, cannot be emphasized too strongly. Aside from lowering the patient's general vitality, it makes them susceptible to environmental changes as a result of their lowered resistance. It predisposes thus to any malady to which they may be exposed.

In addition may be enumerated some of the disease conditions which may be at times directly traceable to tonsillar infection, such as rheumatism, endocarditis, neuritis, pyelitis, and arthritis.

The possibility of the infection being carried elsewhere to some part of the body other than those mentioned above is now a fact instead of a fancy. How often, indeed, do we observe that a patient, usually in middle life or just beyond, has a so-called physical or nervous breakdown, or is bothered with those indefinite symptoms associated with lowered vitality. He consults a physician—his tonsils or teeth, or both, are found infected. They are removed and he improves for several months, or they are not removed and he continues to absorb their poison. Then he suddenly or insidiously develops evidence of a gall-bladder or appendiceal infection. If the tonsil or tooth infection had been discovered in its incipiency and removed, he might have been spared this later development.

Tonsil infection and its relation to thyroid activity is not clear, but not infrequently is found a chronic infection of the tonsils present in a case of hyperthyroidism.

SINUS INFECTION

The amount of local discomfort and general disturbance due to an infection of the nasal sinuses varies greatly, but is present in all cases to some degree. An interesting fact recently brought to light is the influence of chronic sinuitis in producing respiratory disease, such as chronic bronchitis, bronchiectasis, asthma, etc. This may be brought about by two routes: by lymphatic drainage into the mediastinal lymph glands from the infected sinuses, or by direct contamination of the tracheal and bronchial mucous membranes from the postpalatal dropping of the infected sinus exudate.

GALL-BLADDER

It is not the acutely inflamed gall-bladder which is difficult to diagnose, but the chronically infected one which harbors infective organisms of attenuated virulence. There may be no history of acute symptoms or localized discomfort if there is no mechanical interference with the biliary ducts, yet there may be such a systemic toxemia produced as to make the person a comparative invalid. Besides, sooner or later, in the majority of cases, acute inflammation will appear, and may demand emergency surgical measures to preserve the patient's life.

KIDNEY

The most common infection of the kidney, and the only one to be mentioned here, is that of pyelitis. Pyelitis most often arrives via one or two routes:

1. First in frequency is the partial occlusion of the ureter, either by a calculus or a narrowing of its lumen the cause of which may or may not be explained.

2. A pyelitis may develop secondarily to a focus of infection elsewhere, such as an infection in the appendix or gall-bladder.

I recall one very severe case of pyelitis which resisted all efforts to relieve until some badly diseased tonsils were removed, when the pyelitis disappeared spontaneously.

SEMINAL VESICLES

When the seminal vesicles, though infrequently the site of a chronic infection, are so involved, the existence of the infection often escapes the notice of everyone but the careful, painstaking examiner. The infection is usually the gonococcus, and the condition is remedied by a vasotomy, and the injection of 20 to 25 c. c. of a strong gonococcide. I might cite several cases, but two will suffice.

One is a patient who suffered from recurring attacks of lumbago, over a period of three years. The attacks were so severe as to put him in bed from one to three weeks. He has been completely relieved over a period of two years.

Another case—one of arthritis which had been present for two years, was relieved by administering the treatment just outlined to the infected seminal vesicles.

FALLOPIAN TUBES AND CERVIX UTERI

Infection of the fallopian tubes is sufficient to produce systemic disturbance, also causes sufficient local discomfort that they are not likely to go undetected. This is not true of many infected cervices. The local discomfort is usually slight, except perhaps for a troublesome leukorrhea, which the patient has become accustomed to, and bears uncomplainingly. Persistent lumbar backache, or a sense of weight and heaviness in the pelvis in any woman, indicates the advisability of a pelvic examination. If the cervix is the seat of infection, that fact is then quite obvious and the diagnosis not difficult, if an examination of it is made.

GASTRO-INTESTINAL TRACT

The part that a focal infection of the teeth, tonsils, sinuses, etc., may play in producing peptic ulcer is not clear. It has been observed, however, that they frequently co-exist.

Probably the large intestines and the appendix are the chief harbors where "focal infection" finds lodgment in the intestinal tract.

Appendicitis in its various forms need not be discussed here.

That focal infection of the colon, and poor colonic elimination go hand in hand, is a well known fact, as is the realization also of the troubles which may be produced or aggravated by these twin maladies. For the detection and relief of these disturbances I refer you to the numerous treatises on this subject, as it is too large a subject to discuss here.

In conclusion, I would again plea for a better understanding and more teamwork between the general practitioner and the surgeon if focal infections are to be discovered and eradicated most expediently.

25 E. Washington St.

Book Notices

CONSECRATIO MEDICI and Other Papers. By Harvey Cushing, M.D., Surgeon-in-Chief of the Peter Bent Brigham Hospital; Professor of Surgery in the Harvard Medical School. Cloth, pp. 276. Price, $2.50 net. Little, Brown & Company, 34 Beacon St., Boston, 1928.

This is an interesting collection of papers in which are found sage remarks on various phases of the history of medicine, on changes in medical education and the development of specialism, on the relation of the physician to the surgeon, etc. The temptation is great to quote extensively, but only a few quotations can be given:

"The curricular tree has become overloaded by grafting upon the clinical branches an undue profusion of specialties, few of them of fundamental importance even though they doubtless bear fruit of marketable value which dangles before the student's eyes so alluringly that he is prone to forget, or to overlook entirely, the source or origin of the specialty in Greater Medicine." (p. 150.)

"Anatomy and pathology just now appear to the unimaginative to have been thoroughly explored; the pioneers have taken the surface washings, and rather than dig deep for gold we prefer to look elsewhere for novelties and chance findings." (p. 156.)

"When in common parlance we differentiate physician and surgeon, we do so only on the basis of therapeutics, and, granting the same underlying knowledge of disease, this is all that separates from Medicine proper, homeopathy and osteopathy and all the other therapeutic cults, each of which reaches some degree of sanity so soon as it undertakes to perform surgical operations, as in time it is inevitable each one of them should do." (p. 149.)

"The practitioner cannot be chemist, neurologist, bacteriologist, ophthalmologist, radiographer, surgeon, and what not rolled into one, and do effective work. . . . As the cooperation of those expert in special lines becomes more and more necessary, the tendency will grow for these conjoint studies of individual cases of disease to be carried out in properly equipped hospitals." (p. 75.)

"We have gained much for science but have lost much for practice by the course we are following, and I look forward to a time when the pendulum will swing back, not to a day when the spirit of research will be any less active, but to a day when suitable representatives of the clinical departments will be delegated to correlate the teaching in the science courses so that their bearing on what is to come may be constantly kept in mind." (p. 7.)

"Medicine no longer, even as a practicing profession, is looked upon as uncommunicative, consulting in the back room as though it had something to conceal from patient or family; for in the individual case the family, and in the general case the public, are not only awakened, but are sufficiently informed to come into an open consultation in the struggle against disease." (p. 51.)

YOU MAY WANT TO LISTEN IN ON THIS

Dr. C. J. Gaddis will speak on Wednesday, February 13, at 1:30 p. m. Central Time, from WNAX Station, Yankton, S. D., on "Osteopathy as a Vocation."

This will be one of a series of weekly talks given in connection with the Radio School of Vocational Guidance and Self-Analysis, Yankton, S. D., a new enterprise in the radio-educative sphere. The talks are primarily intended for the students in all the high schools of South Dakota, who will listen in from 1:30 to 2:00, by special arrangement with the state superintendent of schools. Each speaker is an outstanding leader in his calling, and Dr. Gaddis' address will open a new door of opportunity for osteopathic student recruiting. All who listen in on WNAX will hear something good about osteopathy as a life work, and as the talk will be published next day in the newspapers, osteopathy should have a wide hearing in South Dakota and adjacent territory.

This radio school is directed by D. E. Cleveland, radio pastor, and sponsored by Gurney Seed and Nursery Co., Yankton, S. D.

Colleges

CHICAGO COLLEGE OF OSTEOPATHY

The winter quarter opened January 7 with an increased enrollment. At the present time the College has more students on the active roll than at any period during the year 1927-28. A minimum figure was set in the dean's office, and it is a pleasure to report that this figure has been reached.

We are already receiving applications for the class to enter September 30. With the proper co-operation of the physicians who are actively supporting the College this new class should number 100 students.

The hockey team has been engaged in active practice, and hopes to make several public appearances before the season is over. The outdoor game scheduled for January 18 was dropped on account of the January thaw, which of course came on the wrong date. Other dates will be posted from time to time, and we hope the boys will be able to display their new sweaters frequently.

Dr. Floyd Peckham is learning practical hospital management from the standpoint of the patient for a week or two. He thinks there is much truth in the adage, "It is more blessed to give than to receive." The enforced quiet is doing him a world of good, and we expect him back at his post with renewed energy in a short time.

The student body listened with much interest and appreciation to a talk on "The Osteopath as a Specialist" by Dr. D. L. Clark, Denver, president of the A. O. A., who visited the College on January 14. We need men with Dr. Clark's enthusiasm for straight osteopathic work, without in any way belittling those of our profession who prefer the specialties.

Dr. George C. Taplin of Boston spent the greater part of Friday and Saturday, January 18 and 19, with groups of students, discussing various phases of technic. Dr. Taplin spoke to general assembly Friday morning.

The icy sidewalks were responsible for tardiness and absence of some of our teachers the second week of the term. The ravages of flu, pneumonia and kindred diseases are on the wane, and our attendance approaches normal again.

Dr. B. F. Wells, dean, spoke on January 11 before the convention of myocular technicians at the Maryland Hotel. The address, which was well received, was on "Blood Pressure."

COLLEGE OF OSTEOPATHIC PHYSICIANS AND SURGEONS

(The copy for the January issue was not received in time for publication, so we include it in this month's notes. Ed.)

STUDENT BODY

The college was fortunate to be included in the itinerary of Dr. D. L. Clark, president of the A. O. A., who addressed the students. His sincere nature, modest manner and enthusiasm for osteopathy immediately won the enthusiasm of his hearers. Dr. Clark favored the assembly with a valuable demonstration of foot technic, and his visit spurred the students on to greater effort.

A recent speaker on the Student Body program was Mr. F. C. Silver, whose subject was foot disorders.

Dr. Hermon E. Beckwith addressed the assembly at Nova, pointing out to the students that one dollar of their student body fees entitled each student to active membership privileges in the California Osteopathic Association, a subscription to the *Western Osteopath*, and the opportunity to attend all meetings and conventions of the Association. The main speaker of the assembly was "Joe" Pipal, athletic coach of Occidental, our neighbor university. He spoke in flattering terms of the help being rendered throughout the nation, on athletic fields and in locker rooms, by osteopathic physicians and students.

One of the most interesting student body meetings held this school year was the one addressed by Dr. Charles E. Still, son of Dr. Andrew Taylor Still. He impressed the students with his stories of the early days of osteopathy, and paid a glowing tribute to our president, Dr. Van H. Gerdine, who, he said, had been connected, almost from the first, with the academic work of the profession.

Dr. Dayton Turney, pathologist of Unit 2, told the students at a recent assembly of the problems of a pathologist and incidents in the everyday work carried on in the hospital laboratories.

The week of December 17 meant a lot of headaches and midnight oil for everybody in the school. Finals beset us again. But this year we started out with a clean slate.

SUB-FRESHMAN CLASS

On the evening of November 28 the members of the Sub-Freshman class had a very enjoyable dinner dance at the Deauville Beach Club. A large representation of the class was present and all are agreed the affair was a big success in every way.

The long table was very attractively decorated. The flowers, candles, ribbons, Thanksgiving place cards and the dainty dolls for the ladies all blended in a most harmonious manner. The human skull centerpiece was most significant of our "Noble Institution of Learning" and caused no little comment among the guests of the club. Dinner was served with the unerring service for which the club is noted; and the music, both during the dinner and for the dancing, was fine.

A wonderful spirit of cooperation was shown by the members and officers of the class in putting this party over. As a class it is our aim to make a success of everything that we undertake. We feel that our first effort did not fall short—may our future good times be of the same high standard.

WILLIAM T. BARROWS.

ATLAS

Friday night, October 26, the members of the Atlas Club and several of the new men of the school enjoyed a very profitable talk on "The Advantages of a Fraternity to a College Man," given by Dr. Beckwith. Dr. Bill Pritchard gave us something to think about on the subject of "A Physician and His Money"; he lamented the fact that most professional men do not have the training or experience to take care of whatever capital they may acquire.

The following week, at a joint meeting of the Axis and Atlas Clubs held in the college clinic, we were very forunate to have Dr. Curtis Brigham give us some of his refreshing thoughts on "The Relationship of the Physician to Society." The members of the Axis Club served a light luncheon, after which Dr. Collinge opened the clinic for inspection to all those who were not acquainted with its many departments.

Several social and special educational functions are being planned which are rounding out a program that points toward a very successful year.

The past few weeks have been more than full of activities which have given the Atlas Club plenty of things for which to the thankful. On November 13 forty active members and field men enjoyed a wonderful dinner and program at the Orange Tea Shop, the crowning feature of the evening being a demonstration and explanation of special foot technic by Brother D. L. Clark, President of the A. O. A.

To continue its policy of frequent educational features the Atlas Club has been fortunate in enlisting the services of Dr. Hermon Beckwith in a series of illustrated lectures on "The X-ray and Its Diagnostic Application." Dr. Beckwith, the instructor in X-ray at the clinic, is giving us the essence of the results of many years research and observation, representing a point of view not to be obtained from the textbook.

We wish to extend to everyone a hearty season's greetings, hoping that the New Year will be an increasingly successful and profitable one for everybody.

EUGENE SPIVEY,
Styloid.

IOTA TAU SIGMA

Since our last appearance in these columns much water has passed under the bridge. Iota Tau Sigma has progressed a great deal in the past few months.

For the last year the need for larger quarters for our chapter house was greatly felt, but this fall, due to the progress and growth, that need became too great to deny any longer. So the beginning of November found us in a beautiful spacious home on Laveta Terrace, that suits our needs perfectly. By way of a housewarming the fraternity gave a dance November 3. The orchestra cer-

tainly gave everyone tingling toes and the specialty numbers were very entertaining. Of course the new men of the college who attended enjoyed themselves even beyond their expectations, but then they always do.

Then Tuesday night, November 6, the new men were entertained at a smoker. Many of our brothers in the field were present. Some of their talks were educational, others were amusing. Dr. Hal Perry of Unit No. 2, offered some particularly amusing subjects on his movie projector. Along toward 9:30 everyone got pretty hungry but not for long. The fare was an Italian dinner, including salad, spaghetti a l'italienne and Italian red wine. But, of course, the dessert had to be purely American pie and coffee royale. So everyone voted the smoker a success and went home feeling well to do, with the sensation of comfortable distention in the epigastrium.

On Thursday, November 8, at the invitation of Dr. Dain L. Tasker, we invited several of the freshmen to the wonderful steak dinner that he served in his open-air dining room. After dinner Dr. Tasker took us on a pictorial journey through the beauty spots of the west. After that we all went back to the house and enjoyed the anecdotes and experiences of the men who have long since graduated.

We want to take this opportunity to welcome heartily the men who have just embarked on the career of osteopathy. You new men are to be congratulated on your choice, not only of this branch of science, but of this particular college, which is the most progressive exponent of the most progressive science that the world has ever seen.

The program outlined for this year is one that calls for progress. We feel that under the direction of Hartley Widdess, our new president; Rosie Winchell, vice president; F. E. Dowey, treasurer, and Charles M. Crane, secretary, that this program will be successfully carried out. Please stand by for further announcements.

CHARLES M. CRANE,
Secretary.

PHI SIGMA GAMMA

On November 2 eighty-five reservations for the alumni, active members and their guests were made for the Deauville Beach Club. The speakers included Dr. George W. Woodbury and Dr. Ernest Bashor. Both speakers belong to the alumni of the fraternity. They were thanked on behalf of the fraternity by Brother Roy Walker.

On the evening of November 17 members and pledges enjoyed a very profitable talk on "Common Colds—Their Cure," given in a very interesting manner by Brother Dr. C. E. Decker.

Much credit is due the Initiation Planning Committee for their choice of program and the very impressive atmosphere that prevailed throughout the entire formal pledging meeting, which was held on the evening of December 7. The following, who for the past seven years have been displaying the skull-bone, became neophytes: William Barrows, James Cook, Ward A. DeWitt, Harold Kelly, Daymond La Mar, E. J. Martin, Ronald MacCorkell, Richard Taylor, Reynolds Thompson, Francis M. White, Paul Winters and Charles Vogel.

FREDERICK GERBIG,
Correspondent.

DELTA OMEGA GAMMA

October 14 the girls were entertained at a delightful afternoon tea given at Dr. Bell's residence. A number of the field doctors were present.

Wednesday, October 17, the field doctors entertained the sorority and the new girls with a mixed bridge-dance at the charming home of Dr. Whiting in South Pasadena. A buffet supper was served.

An informal dance was held at the home of Dr. Ora Webb Elerath on October 26.

A very pleasant formal dinner dance was held, November 9, by the sorority at the Pacific Coast Club, Long Beach. The pledges and their escorts were guests of honor. An impressive candle light pledging service was held. The pledges were: Miss Bernice Burnett, Miss Frances Metts and Mrs. Louisa Crane.

KAPPA PSI DELTA

A formal reception was held at the home of Dr. Zora Morris, October 20, to enable the new students to meet the Kappa field doctors.

The Kappas entertained the rushies, Ruth Bjorkmann, Blanche Maxwell and Peggy Shank, with a house party at the beach home of Adelaide Hawks.

An informal dance on November 2 for the Misses Bjorkmann, Mattis, Maxwell and Shank was given by the active members.

Miss Sally Colledge, a Kappa pledge, entertained the rushies and active members at a dinner followed by an educational lecture, given by Dr. Harker.

Kappa Psi Delta entertained at dinner at the Chateau, November 9, Misses Ruth Bjorkmann and Peggy Shank, who were pledged afterwards by Dr. Patterson at the home of Dr. Norris.

ADELAIDE HAWKS,
Secretary.

ETA NU CHI

With so many enthusiastic new men students at the college this year Eta Nu Chi has had real pleasure in welcoming the newer students to C. O. P. S.

On October 26 forty reservations for active members and their guests were made for a banquet at the Elite. The speakers, who referred in complimentary terms to the fraternity were Dr. Carle Phinney and Dr. J. H. Long, the newest member of the faculty, being instructor in gynecology at the clinic. Both men were thanked on behalf of the fraternity by Brother Clement L. Villim, who felicitously recapitulated for the benefit of our guests the principals and ideals which motivate Eta Nu Chi. Brother President Walter W. Hopps adjourned the banqueting group to meet at the Orpheum. A feature for the benefit of our Orpheum party was inserted in the theater program and all in the audience enjoyed the added feature.

Responding to a moderate number of invitations to our pledging meeting, ten men were pledged to the honor of neophytes of Eta Nu Chi at an impressive pledging ceremony on the night of November 9. Eta Nu Chi is extremely happy to publish the names of the following neophytes who have taken the wings and key: Cecil C. Cazel, Paul Ford, Jack Heidenrich, J. Lawrence Houts, Peter McCallum, Loring Worth Mann, Herbert R. Packard, Samuel R. Stiff, Don Vermillion, Wilbur Williams.

Although the youngest fraternity, Eta Nu Chi is the first at the college to announce that it has been granted a charter by the State of California. The receipt of this document was a proud moment that the fraternity will continue to remember.

The chapter has been holding very interesting Monday evening meetings. The pledges (barbs) have been responsible for the entertainment of the later part of the evening.

On December 8, the fraternity gave a dinner dance in honor of its pledges at Sunset Canyon Country Club. The party was very beautiful and the attentions of the caterers made the banquet a colorful and pleasing one. Everyone present heartily enjoyed the party given in honor of the ten neophytes named above.

The fraternity extends its sympathy to Brother Vay L. Peterson in the loss of his mother.

WILHELM F. MADSEN,
Secretary.

DES MOINES STILL COLLEGE OF OSTEOPATHY

The Christmas vacation started December 20, but as usual a good many grandmothers and other near relatives were very sick the early part of the week. And so nearly all of the gang went home and had a good time for two weeks. Not so with the chosen few. Thirty-two stayed over and worked in the dissecting room each morning, cutting out Virg's chances of catching up on some much-needed sleep as well as a few other things. The office force and the seniors who stayed over were busy as well. Thirteen Ob. cases were handled during the vacation period and numerous calls of other types kept all the available treating staff on the go most of the time. The flu, while not so bad in Des Moines, has furnished plenty of experience to the seniors in the line of acute work.

One of the outstanding accomplishments of the month was the preparation and completion of a memento to Drs. S. S. and Ella Still. This was in the form of a booklet of sheepskin, bound in leather and containing the original autographs of the trustees, faculty and entire student body of the college. It was headed with a greeting expressing

the appreciation of the group here in Des Moines for the founding of the college thirty years ago.[1]

At the opening of the college after New Year's every effort seemed to be directed towards the successful ending of the term. Classes have now completed their work and are beginning the last half of the year's study. The Atlas, Iota Tau Sigma, Phi Sigma Gamma, Sigma Sigma Phi and other organizations have held their semi-annual banquets and have razzed and dined the seniors.

The College gave its senior banquet Friday, January 11. This was attended by the entire class, members of the board of trustees and the faculty. Dr. John Woods acted as toastmaster and called on Dr. Harry Marshall, Dr. Robert Bachman and Professor Sutton for talks. Miss Lillian Tracy, president of the class, responded. A surprise feature of the program was a number of unique musical selections by Mr. Pollard and his group of boys who play harmonicas. If time had not interfered we would be there yet listening to the music. The morning of the same day was given over to the Seniors for their class day exercises. At this time the special awards were made for extra work done in the college and the Sigma Sigma Phi certificates were given. James Shaffer received the certificate for service to the college and profession and Roy Lypps the award for proficiency in osteopathy. The class will was read and the Seniors closed their last assembly in the school with the college song.

Graduation was held in the evening of January 17 at the Hoyt-Sherman Place. At this time the Seniors received their degrees and were thrust out into a cruel and especially cold world. Judge Hubert Utterback delivered the address, Dean Schwartz presented the class and President Johnson conferred the degrees. This closes another term.

We are now looking forward to the long grind ahead until the close of the spring term. Prospects for the incoming class are brighter than last year and there is no doubt that there will be more enter than graduate. Many of the students are taking an active interest in the preparations being made for the convention and expect to stay over the few days to take advantage of it.

Dr. D. L. Clark, president of the A. O. A., made a flying visit to the college January 16. On account of ill health at home he had to limit his time, but stated that he was very favorably impressed with the student body, the college building and the many evidences of our progress. An assembly was called so that the student body might have the privilege of hearing and meeting Dr. Clark, and all expressed their pleasure in hearing some good osteopathic truths expressed in sincere, emphatic terms. All feel stronger after this visit.

Dr. Clark looked over the arrangements being made for the coming convention and seemed highly gratified at the progress made. A banquet was held in his honor at the Fort Des Moines Hotel in the evening, followed by an informal meeting at which Dr. Clark talked for a short time regarding his ideals in osteopathy. This was attended by the local group with a number of visitors from the nearby towns.

Dr. Foreman of Chicago is giving some review work at the college for a few weks. Preceding his own lectures he attends Dr. Halladay's lectures in dissection. Virg has put Dr. Foreman's name on the roll and says that his next move will be to send him to the office to get a receipt stating that his tuition is paid or he will have to get out of the class.

PHILADELPHIA COLLEGE OF OSTEOPATHY

When more than two hundred of the leading osteopaths of the East met at dinner at the Bellevue-Stratford Hotel on January 12 to hear the announcement that the Philadelphia College of Osteopathy and the Osteopathic Hospital of Philadelphia had determined to raise $1,030,000 for construction of new institution buildings they were electrified by an initial gift of $100,000.

This magnificent start on the campaign came from a prominent Philadelphia business man, S. Canning Childs, who came to the dinner and became so enthusiastic over the project that he immediately offered $100,000 to score as the closing gift of the campaign and cap the efforts of the various teams.

The announcement of the gift by Dr. C. D. Balbirnie, close personal friend of Mr. Childs, produced an ovation and Mr. Childs in response said that his donation only partially expressed his interest in and regard for the science of osteopathy.

Alfred P. Post, president of the board and president of the trustees group, who opened the meeting, made the first statement of the purpose of the college and hospital to raise the $1,030,000 for a complete new institution on ground at 48th and Spruce streets.

"The officials of the college and the hospital have agreed to begin only this campaign because the need for accommodation of both students and patients has become pressing and there is a demand both from the profession and business men for a bigger and newer institution," Mr. Post said.

Dr. Edgar O. Holden, dean of the College of Osteopathy, pointed out that the new institution would provide accommodations for 500 students, and the hospital would provide 80 beds. "As this is the largest institution of its kind in the East, the new structure will make Philadelphia the center for the teaching of osteopathy in the country," said Dr. Holden.

Dr. O. J. Snyder, one of the leading figures in osteopathy in this city, and former president of the American Osteopathic Association, said that the campaign would be carried on during the period from February 22 to March 4 and that about 2,500 men and women would participate as members of the different teams.

"Osteopathy long since has passed the experimental stage." Dr. Snyder pointed out. "It is accepted throughout the world as an established profession, contributing vitally to the relief of human suffering. This new institution will place it on an even higher plane, and Philadelphia, always in the lead in scientific endeavor, will have the credit before the nation for this effort."

Dr. Charles Hazzard of New York, and R. C. McDaniel, president of the senior class of College of Osteopathy, also spoke.

KANSAS CITY COLLEGE OF OSTEOPATHY AND SURGERY

Dr. George C. Taplin made his annual visit Monday, January 14. We are always glad to see Dr. Taplin as he never fails to give us something worth while, and puts it over in such a way that it is easy to comprehend and remember. His technic for the knee was the outstanding feature of his demonstration this year, as well as some very interesting points on foot work. We appreciate Dr. Taplin's visits very much, and the fact that he was given the entire day is evidence of our interest. He commended the school on the kind of work it is doing and coming from a man of his standing, we feel that the courses given here must be worthy of commendation. He was a guest of Dr. J. H. Styles while in the city. He planned to go from here to Kirksville for lectures and demonstrations there.

Dr. D. L. Clark, our national president, was a very welcome visitor Thursday, January 17. Due to sickness in the family he was able to stay only one day, but made good use of his time while here, speaking twice during the day at the college and once in the evening, in addition to a visit to Lakeside Hospital. In assembly he gave the students a fatherly, heart-to-heart talk, stressing the value of making specialties of the different branches of osteopathy, particularly foot work in which he has been engaged for the last nine years. He urged co-operation, individual thinking, specializing and the consideration of patient before fee as the main points in progressive osteopathy. Another important point he made was to listen to what the other fellow has to say, no matter how dry his subject. You may get only one or two points, yet you may enlarge on them and make something very valuable. The monthly meeting and banquet of the city association was moved up one day in order that Dr. Clark might be present and speak. It was well attended and enjoyed. Dr. Clark seemed pleased with the college and noted the many improvements of the last few years. It is some time since he was here before, but it is to be hoped that he will come more frequently in future. He was a guest of Dr. George J. Conley.

[1] A more complete description of the memento will appear later in THE FORUM.

Dr. Yale Castlio, a graduate of the class of '24, and a member of the Lakeside staff, has been put in charge of the general college clinic. New and improved history sheets have been printed and have been in use since the first of the year. Letters are being sent out to former patients, and other measures are being used for advertising and building up the clinic. Dr. Castlio is exceptionally well fitted for this work and we anticipate a marked improvement under his capable supervision.

Vol. III of the "Osteo-Path" is coming along nicely under the capable direction of Editor Houston. We are expecting it to surpass Vol. II, which is a lot for the writer to say, as he was the literary editor of same. A great deal of home and foreign advertising has been secured, and the business manager, Mr. Frank Rusinski, is certainly to be congratulated on the way he has handled this part of the work.

The college glee club has been progressing more rapidly the last few weeks, and several new members have been added. We are especially glad to see the freshmen boys rallying to its support. Miss Leanore Warner is now accompanying at the piano, and is co-operating splendidly.

We are very glad to report a marked improvement in the condition of Myron Jones, a senior student, who has been ill at the Lakeside Hospital for some weeks. J. Frank Price, also of the senior class, is back in school again, after an operation at Lakeside. We are glad his ready wit did not go the way of his appendix.

January 23, 24 and 25 will be devoted to examinations, bringing to a close the first semester. There is quite a large enrollment of new students in the January class, and we welcome them heartily.

Harold McAnally, president of the senior class and also representative man this year, has been kept from school for some time with a Pott's fracture, having slipped on the ice while crossing the street near his home.

KIRKSVILLE COLLEGE OF OSTEOPATHY AND SURGERY

If members of the I. T. S. fraternity had returned to Kirksville several days early, after the Christmas vacation, they would have been accorded a warm welcome indeed. But as it actually happened the boys found their chateau in "status quo," as they were greeted by the few brothers who resided in the house over vacation.

The fire started in the rafters over the furnace and carried up through the two stories above, destroying the kitchen and several study rooms. Not a great many personal belongings were lost or destroyed, but the house was damaged so that it could not be occupied during the present zero weather. Temporary housing has been arranged, and the fraternity has rented a house at 301 East Jefferson Street.

This episode has made the Christmas fire for fraternities an annual affair, and recalls the similar plight of the P. S. G.'s last year. Santa Claus seems determined to make Christmas parties hot as blazes for the Greek Letter men who spend the holidays in Kirksville.

* * *

The annual Children's Free Clinic was held in the Administration Building, December 14 and 15. Due to the inclement weather there was not as large an attendance as in some previous years, but the success of the clinic was probably more pronounced. The regulations were altered to include all children up to the age of six years, and other features were added to increase the efficiency of the clinic.

Remembering the congestion and large amount of work in the eye, ear, nose and throat department in former years, Dr. Hardy was assisted by Dr. DeWitt and members of the senior class. Dr. Stella Fulton, Drs. Becker, Petermeyer, Brink and Denby had charge of the physical examinations. Dr. Thomas was in charge of the dental department.

A great amount of interesting data was accessible to the students and doctors, both from new patients and in checking up on former cases in the clinic. Many valuable angles were noted on the success of treatment of cases during the past year.

THE NEW NON-SURGICAL TREATMENT OF PHLEBECTASIS VARIX AND SEQUELAE

(Continued from page 446)

The skin of the whole area may be well nourished and the only evidence may be a single, large, tortuous trunk, passing down the thigh and inner calf and ankle. However, if this is not so complete and the stasis is so widespread that large areas are bathed with stagnant blood, tissue changes occur, which must necessarily lead to ulcer.

SYMPTOMS

In the lower extremities, varicosities affect both the deep and the superficial system of veins. These two systems have various anastomotic communications by which the pressure in both tends to become equalized. The superficial varicosities are seen chiefly in the course of the internal saphenous vein and its various branches and tributaries. In such cases the dilated veins are seen on the inner aspect of the calf, in the inner and posterior aspect of the knee, and along the inner surface of the thigh. If, as sometimes happens, the lesions are confined chiefly to the tributaries of the external saphenous vein, the varicosities occupy the outer surface and posterior area of the leg.

The severity of the subjective symptoms often fail to correspond with that of the objective signs. Many cases of moderate degree may be accompanied with no discomfort whatever. On the other hand, the subjective symptoms may be quite marked in cases in which superficial veins show little change.

The onset of the symptoms is usually slow and insidious, and often occurs before the appearance of the subcutaneous varicosities. At first there are only some ill-defined discomfort and feeling of tension on the leg and calf. The limb feels heavy after walking or standing, or at the end of the day, and there may be some formication or itching.

Frequently there is some edema of the ankle after long standing or exertion. The small venous radicles often become dilated appearing as minute reddish puncta, later running together to form brownish patches of pigmentation. Eczema is often induced by irritation of coarse and rough clothing, and may lead to actual ulceration.

It is with the well-developed cases that we are most concerned in this connection with the treatment to be outlined. In these cases over the affected region the veins show as serpentine, bluish cords, winding in every direction beneath the elevated and often thinned and atrophied skin. If the main trunk of the great saphenous is involved, it may show as a prominent tortuous cord as large as a finger, coursing along the inner aspect of the thigh and often presenting an ampullar dilatation at the saphenous opening above the ostial valves.

DIAGNOSIS

The recognition of varicose veins is usually easy. The subjective symptoms are characteristic, and the appearance of the subcutaneous varicosities can hardly be mistaken. Varicosities of the deep veins can frequently be recognized before the subjective symptoms, if the possibility of their occurrence be borne in mind. The soft elastic reducible tumor by the ampullar dilatation at the mouth of the internal saphenous vein has occasionally been mistaken for a femoral hernia. Very often patients complain of pain of a rheumatic nature in the knee or ankle, or through the lower leg, and a mistaken diagnosis is made because in reality these pains are due to the extensive varicosities present, even though they may not be obvious on first inspection.

There are individuals who suffer from pain in the lower extremities, ranging all the way from so-called rheumatic to sciatic pains. Both the internal and external saphenous followed by companion nerves account for the pain and give rise to cramps, as well as extreme sensation of heaviness. The patient complains of great fatigue if compelled to be on her feet any length of time.

Since the appearance is so characteristic, the important question of diagnosis lies in the decision of treat-

ment. A number of tests aid in our determination. Knowing the blood passes downward when the valves are incompetent, the simplest test is suddenly to lower the leg which has previously been emptied by elevation. The leg is raised above the level of the heart until the veins are emptied; it is then rapidly lowered and in the case of varicosity and incompetence of the valves, the veins at once become distended. This test was devised by Trendelenburg and known by that name. Additional evidence is often obtained from this test by making pressure upon the great saphenous vein in the thigh to prevent the flow of blood down it. When the leg is lowered, the veins remained collapsed below the point of pressure and as the pressure is removed the veins fill with a shock. If the surface vessels remained empty for a half minute or more after lowering the leg we are fairly assured we have simple surface varicosities and uncomplicated with the deep system. When they fill rapidly more information is advisable.

Again, proceeding as before, the pressure is made and maintained while the patient stands. If then the veins are seen and felt to fill rapidly below our point of constriction, they obviously have not filled by a down flow from above nor have they filled with fresh blood from the arterial circulation; nearly a minute is required for this to take place. Consequently, the valves of the perforating vessels must be incompetent and allow the filling from the deep veins. Normally the valves in the perforators conduct the blood from without inward, so this indicates a condition of grave importance, especially so in ulcerated cases. The external saphenous, even though not greatly enlarged, may occasionally communicate with the internal saphenous and be responsible for the filling below our point of constriction in the thigh. When this is suspected, the same test may be made at the level of the knee, and if the rapid filling below our point of pressure is checked, the external saphenous is the leaking perforator and must be eradicated.

TYPES OF VARICOSE VEINS

When ascertaining the extent of the involvement as near as possible it is well to keep in mind the types of varicosities to aid in our choice of treatment.

The common type is the familiar large dilated tortuous veins of the internal saphenous and its tributaries. Often it is plainly visible in the thigh, especially in men, but due to more subcutaneous fat in women, it is frequently palpable but not visible. Its position may be detected by locating the impulse set up by tapping the tense vein in the calf, a procedure called the Schwartz test. In this type the varicosities are gradually established and sufficient compensatory circulation outside the great saphenous system furnished so that they are easy to treat. When ulcer occurs it usually lies upon a "lake of blood" from a large vessel, and unless the ulcer is badly infected it is easy to cure. The Trendelenburg test shows immediate filling on lowering the leg. The constriction test shows no filling since the perforators are usually competent and the pressure holds back the flow from above.

In contrast to this common type are the varicosities which follow a phlebitis or when they attack veins already to a more or less extent varicose. Then the surface vessels are usually invisible due to the extensive scarred and shrunken condition. However, careful palpatation will detect the veins as hardened cords. Enlarged tributaries will be evident with this condition, but they are not the principal channels and the patient's complaint is invariably an ulcer or ulcers.

The phlebitis leads to a widespread infection of the calf and leaves the tissues poorly nourished and infiltrated, together, with the breaking down of the perforating veins. So these factors—stasis and malnutrition, grow progressively worse and ulcers necessarily appear sooner or later in practically all these unfortunate cases. This type of ulcer is frequently mistaken for a syphilitic ulcer, but the history of the case with a negative Wassermann usually will clear up the diagnosis.

In this type the constriction test usually shows a rapid filling below the point of pressure, though frequently one must determine the filling by the sense of touch rather than through the sense of sight, owing to the hardened and shrunken surface vessels.

The third type includes those arising without obvious cause, and might be termed the "freaks." This takes the dilatations of vessels of the outer leg and thigh independent of the internal saphenous. This includes the external saphenous, and presents a condition difficult to explain on the basis of back pressure, since one looks for the internal saphenous to be involved in all cases before the external.

This study of the types, together with our various diagnostic tests, brings us a clearer conception of the conditions in any given case and affords a sounder basis for our selection of treatment.

VARIOUS TREATMENT

Most of us, I think, are quite familiar with the usual palliative and operative treatment of varicosities. In some cases a change of occupation is desirable, elastic stockings or the use of woven elastic bandages will keep the affliction under control to some extent.

Prophylactic measures play an important part, i. e., having the patient take care to avoid injury to the skin of the legs and prevent scratches and bruises. Soap and water, cleanliness of the varicose leg is a necessity. The ointment applied to an ulcer is less important than the pressure of a properly fitted bandage. However, rest in bed is more effective than any bandage.

If a varicose ulcer must be treated in a palliative way, a so-called "jelly" bandage proves an aid. This bandage consists of several layers of ordinary gauze bandage permeated with Unna's paste. The formula below is as good as any.

Zinc Oxide	10 gm.
Gelatin	40 gm.
Glycerin	120 cc.
Water	150 cc.

The gelatin is dissolved in hot water by heating. Mix the zinc oxide with the glycerin. Put all the ingredients together and let stand until hard, occasionally stirring it. The gelatin may be increased at the expense of the glycerin in hot weather.

To use, the paste is heated in a water bath until it liquefies and is applied as follows: Have the leg elevated for some time previous to application. The leg is painted from the toes to the knee and then a thin layer of gauze applied (not too tightly). Upon this a second coat is painted on, and so in turn, three to four layers of gauze impregnated with the paste, are fitted to the leg. Best not to include the heel. After several hours of drying, the jelly bandage is comfortable, flexible and durable, often lasting for several weeks.

It is a good plan to cut out a window over an ulcer for local cleansing and treatment. In general, this is superior to ordinary bandaging, and may prevent the recurrence of ulcer while this dressing is carried out, but the basic varicose condition does not alter, and, at best, is strictly palliative.

Correction of innominate lesions is of importance, leg movements which facilitate the flow of blood upward should be frequently given, even if no apparent tension exists around the groin.

All tissues around Poupart's ligament and the sciatic notch must be watched and kept relaxed.

In all cases, the correction of whatever structural condition may be found which could interfere directly with the circulation or with the nervous control of the legs, is a very important factor in the treatment of varicose veins.

As a word of caution: In no circumstance at any time should any mechanical treatment be applied along the course of a vein treated by the new sclerosing method until complete absorption has taken place.

Trendelenburg's surgical technic consists of tying the saphenous vein just below the saphenous opening. It is indicated (1) when marked impulse occurs in the vein on coughing, showing valvular incompetence; (2) when pressure over the top of the vein prevents the varicose vein from refilling after it has been emptied; when only the tributaries of the internal saphenous vein are involved.

There are serious objections to most palliative or operative treatments of these kinds. First and foremost

because there is no assurance that the varicosity or ulcer will not recur, and the patient is subjected to expense of hospital bill, and the long delay from resuming their occupations, which in most cases they cannot afford. The scars of the operative method are sometimes unsightly and may be more disfiguring than the original varicosities.

The new non-surgical treatment does not give the patient the pain and discomfort of the dressings and the removal of clips or sutures which cause great annoyance, then again there is no need for anesthesia. Too much stress cannot be made on the fact that the injection method is ambulatory.

This one advantage alone cannot be overestimated. Patients will gladly accept this treatment as it is not dangerous for them to carry on their usual duties without interruption. There is no systemic reaction following the treatment. Though a moderate cramp immediately after the injection may be expected, it lasts less than a minute usually.

TECHNIC

A number of different substances have been used for injection and the principal difference between them rests on the question of the pathological change resulting thereby.

Such substances as alcohol, bichloride of mercury precipitate the albumin of the blood and form a thrombus. The intima of the vessel undergoes necrosis, and the intima becomes detached and a part of the thrombus, forming a solid mass within the vein. This can be detected upon palpation as a hard cord, and, of course, is the obliterating agent of the varicose veins. There are no known cases of such thrombus becoming detached.

The other substances, the hypertonic solutions such as sodium salicylate, sodium chloride and others, produce a damage to the intima through their hygroscopic action. This results in a process of inflammation or phlebitis of the venous wall and obliterates it. Sicard has termed the pathological process "endoveinitis" while the pathology is, in fact, a productive adhesive and organizing phlebitis, better described as phlebosclerosis.

These substances are not liable to produce an embolus. The medical profession has been cautious in the use of the obliteration method of treatment for this reason. However, many years of its use with numerous cases treated and cured without a fatality, together with the anatomical-pathological findings of obliterated veins, has brought recognition and established the fact that fear of embolus is imaginary.

The four fatalities on record from embolism were proven by autopsy not to have been due directly to the treatment.

Errors in this method and whatever dangers there are lie in improper and non-aseptic technic. There may be honest differences in opinion as to the best technic—and unquestionably different methods may be used, but any method must be governed by certain principles:

(1) The injection fluid should be as undiluted as possible when it comes in contact with the wall of the vein, that is, as little blood as possible should be aspirated into the barrel of the syringe in order not to dilute the solution.

(2) There must be absolutely none of the injected fluid permitted to lodge under the skin or subcutaneous tissue, for a slough and ulceration will undoubtedly result and lead to serious trouble. The solution which my experience has proven most satisfactory is sodium chloride 20 per cent.

Success of the injection method depends largely on the question whether all the veins involved in the varicose complex have been obliterated.

Frequently, the edema of the leg hides the deeper veins, necessitating a carefully developed sense of touch to elicit them in order to introduce the point of the needle.

As to the number of injections in a given case one cannot say with any degree of certainty. While it is possible in the common type with a single injection, to obliterate the entire complex it is usually best to obliterate the varicosities in several treatments, allowing a few days to lapse between for the reactions to subside somewhat.

The patient experiences little discomfort from the injection when given under careful technic and effective solution. They may complain of a cramp-like sensation in the leg when the solution enters the vessel. Following the treatment, there will be some tenderness for one to three days. If this should be very annoying, a towel wet in cold water and applied will relieve the distress.

CONTRAINDICATIONS

The following are mainly what are to be considered:

Hypertension, heart insufficiency, kidney disease, arterial claudication, pregnancy, and in cases where an idiosyncrasy may exist to a particular drug, as sodium salicylate or quinine. When this occurs some other fluid should be selected.

The injection method of obliteration is unquestionably positive in results. It is here to stay.

It is truly an ambulatory treatment, the patient carries on with his or her duties as usual. Occasionally, however, a patient with a severe reaction may prefer to rest because of post-injection pain.

SUMMARY

When the valves of the superficial veins of the leg are broken down and are no longer able to carry blood toward the heart they are termed varicose veins.

The commonest cause of varicose veins is hard physical labor and child bearing. Varicose veins occur rarely in early life and apparently without known cause. Phlebitis may destroy the valves and produce other changes in the veins.

The postphlebitic varix shows small hard veins and, by the widespread induration and edema of the calf in the advanced cases lead one to a diagnosis.

The internal saphenous with its tributaries is the one commonly affected.

The various tests devised to determine the completeness of surface varicosity will evidence whether the perforating veins are competent.

The deep system is hardly ever involved and is sufficient to carry on the burden of the surface circulation.

The large tortuous varicose veins, so familiar to all, are easily obliterated by treatment.

Varicose ulcers develop first, because the skin is not sufficiently nourished, and second, it becomes traumatized and infected. This frequently occurs in postphlebitic varix.

Acute phlebitis in veins previously normal, as following child bearing or with typhoid fever, should be handled conservatively.

PLEA FOR CAUTION

I trust that members of our profession will not emulate certain members of the medical profession who are bringing so much discredit upon themselves and this new treatment by attempting to treat this condition on the mere outline given by manufacturers of various chemicals recommended for this treatment, or by merely "looking on" at some demonstration as has been attempted. The treatment can be 100 per cent satisfactory. It is a case of technic and more technic. This plea and warning is not original, but comes from such masters as Hanscheel, Wolf, Vischer, Maingot, Carlton, Sicard, and Forestier. Any member of our profession has the ability and capacity to acquire the degree of excellence in technic that will positively mitigate against untoward results. One can no more master this technic without proper instruction and training than that of proctology or any branch of surgery, so let us not bring upon both ourselves and the method unnecessary condemnation by the failure to acquire proper technic.

I felt the necessity of mentioning this due to the fact that we have received so many calls from patients for help following the work of poor operators and, needless to relate, little can be done after the tissue has been damaged through carelessness or ignorance, which is all the more to be deplored when perfect technic will avoid such unpleasant after effects.

920 Nicollet avenue.

BIBLIOGRAPHY

[1]Bayliss, W. M., Principles of General Physiology, p. 710.
[2]Cabot, Physical Diagnosis, p. 432.
[3]Comstock, B. H., Osteopathy in Abstract, p. 10.
[4]Curry, E. K., Osteopathy in Abstract, p. 10.
[5]Gaugier, L., Traitement Des Varices Par La Methods Sclerosante, pp. 7-11.
[6]Gray's Anatomy, p. 757.

[7]Groves, Ernest H., M. S. M. D., B. Sc. (Lond.) F. R. C. S. (Eng.) A Synopsis of Surgery, pp. 11-17 and 150, 151.
[8]Harrower, H. R., A Manual of Pluriglandular Therapy, pp. 144, 145, 146.
[9]Homans, J. M. D., F. A. C. S., Varicose Veins and Ulcer: Methods of Diagnosis and Treatment, *Boston Med. and Surg. Jour.*, Aug. 17, 1922.
[10]Homans, J., The Operative Treatment of Varicose Ulcer, *Boston Med. and Surg. Jour.*, Feb. 26, 1925.
[11]Martin, Orel F., Clinical Diagnosis and Symptoms, p. 249.
[12]McPheeters, H. O., The Injection Treatment of Varicose Veins by the use of Sclerosing Solutions, *Surg., Gynec. and Obst.*, Oct. 1927, pp. 541, 547.
[13]Nelson's Loose Leaf Living Medicine, p. 613, Vol. 4.
[14]Sicard, J. E., Traitement Des Varices par la Methods Sclerosante, pp. 7-11.
[15]Still, The A. T. Research Institute, Clinical Osteopathy.
[16]Waggner, M. R., The Notebook of an Electrotherapeutist, p. 156.
[17]A. Gottlieb, M.D., Los Angeles, Calif.

SECOND SECTION

[1]C. Clinics—North Amer., 7: 1103—Aug., 1927.
[2]*Jour. Am. Med. Assn.*, 89-225 July 16, 1927.
[3]T. H. T. Barber, *Brit. Med. Jour.* 1:594—Apr. 7, 1928.
[4]W. Wolf, *Med. Jour. and Rec.* 127:416 Apr. 18-28.
[5]H.Schussler, *Jour. Am. Med. Assn.* 90:1356, Apr. 28-28.
[6]W. F. Grinstead, *Jour. Am. Med. Assn.* 25:151, Apr. 28.
[7]*Lancet*—1:1022, May 19-28.
[8]R. Thomhill—120:54-58—Jan., 1928, Practitioner.
[9]H. M. Hanschell, *Brit. Med. Jour.* 1:542, Mar. 31-28.
[10]*Lancet* 1:806, April 21-28.
[11]Crivelli, M. J., Australia—1:139, Feb. 4-28.
[12]*Ill. Med. Jour.* 53:175 March—28 Ochsner.
[13]J. Forester, *Jour. Am. Med. Assn.* 90:1932 June 16-28.
[14]O. L. Vischer, *Lancet* 1:223 Jan. 29-27.
[15]*Arch. Surg.* 15:351—Sept. 27.
[16]*Jour. Am. Med. Assn.* 24:469 Oct. 1927.
[17]*Brit. Med. Jour.* 2:307 Aug. 20-27.
[18]*Clin. World* 45:312 Sep.—27.
[19]*Med. Klin.* 23:1378 Sep. 9, 27.

COPY

Dr. W. H. Gillmore,
920 Nicollet Ave.,
Minneapolis, Minnesota.

Dear Dr. Gillmore:

You will find herewith a complete report on the case of Mrs. J. R. N. The laboratory work was carried on as I suggested when discussing this case with you. You will recall that I was of the opinion that the effect upon the kidneys would be very transitory, which our laboratory findings reveal.

Routine Urinalysis on all cases where this treatment is contemplated is absolutely essential to guard against Kidney and Heart lesions, for I do know that it is your desire to always eliminate these factors.

It is indeed pleasing to note the fine results gained in this treatment, especially in view of the fact as borne out in the laboratory work that no lasting or ill effects are encountered.

This case in particular would be well to use with your paper, due to the fact that it was one of the worst—and the greatest amount of solution was used.

CLINICAL NOTES

Names Mrs. J. R. N.
Age 55
Varicose Veins ..... 18 years
Varicose Ulcers ..... 3 years

Time		Total C.C.
	Total of 11-12 120 c.c. of Na Cl 20% was injected into the veins making 14 separate punctures	
2 p. m.	Intake 240 c.c.	240
	Output 225 c.c.	225
	Color, red-brown; albumin 2 (plus); no R.B.C. and no casts	
4 p. m.	Intake 900 c.c.	1140
	Output 100 c.c.	325
	Color, light red-brown; albumin 1 (plus); no R.B.C., no casts	
6 p. m.	Intake 600 c.c.	1740
	Output 100 c.c.	425
	Color, dark yellow; albumin trace, no R.B.C., no casts	
8 p. m.	Intake 300 c.c.	2040
	Output 150 c.c.	575
	Color, lighter yellow; albumin V.F.T., no R.B.C., no casts	
10 p. m.	Intake 100 c.c.	2140
	Output 160 c.c.	735
	Color, amber; albumin V.F.T., no R.B.C., no casts	
12	Intake 200 c.c.	2340
	Output 250 c.c.	985
	Color, amber; albumin V.F.T., no R.B.C. or casts	
4 a. m.	Intake 400 c.c.	2740
	Output 375 c.c.	1360
	Color, amber; albumin V.F.T., no R.B.C. or casts	
8 a. m.	Intake 200 c.c.	3940
	Output 225 c.c.	1585
	Color, amber; albumin V.F.T., no R.B.C or casts	
10 a. m.	Patient was discharged from Hospital	

Symptoms—
1. Headache—relieved by osteopathic treatment
2. Slight edema of feet
3. Appetite—usual type for her
4. Patient was up and about
5. Polydypsia (short duration)

Facts—
1. Albuminuria disappeared in 6 hours (V.F.T. was present before T.)
2. There were no casts in urine
3. There were no R.B.C. in urine.

Very truly yours,
(Signed) J. O. HUMBERT, D.O.

JOH/AT

Business Efficiency

THE EFFICIENT OSTEOPATH

C. C. REID, D.O.
Denver

XXVI

The Psychology of Collections

II

THE FEE BILL

The doctor must not think of the public as a legitimate field for exploitation, at the same time he must, under the circumstances, commercialize sufficiently to meet the economic situation in which he labors. Every physician who is not a surgeon must, at some time or other, have the co-operation of the surgeon, provided he makes proper diagnosis and realizes the need of the patient in the solution of his problems. Some doctors become radically set against operations.

There are usually two or three reasons that explain this situation. One is that they do not do any surgery themselves or they do not do the operation indicated, hence they become extremely conservative. Another reason is that they may have seen surgery abused or seen some bad results from surgical work. Another is that taking the surgical route the patient frequently goes out of their hands and they may lose the patient and even other friends of the patient, in coming to them for future treatment. The ethics of the situation should be paramount in the minds of the general practician and surgeon. The general practician should see that a proper surgical procedure is carried out, if that is the best method to pursue. The surgeon should not only do well his own work but he should co-operate with the general practician and see that the general man's services are properly sold as well as his own fee set for the surgical operation. This can be done without any secret or any fee splitting or any breaking of the Golden Rule. It is often necessary for him to talk it over with the patient before seeing the surgeon. Many people are so situated that the cost of the operation and treatment becomes of paramount importance. Some years ago the Colorado Osteopathic Association adopted a schedule of fees merely to be suggestive. This comes in quite handy for consultation in regard to many lines of operations. The schedule of prices is not adopted to be adhered to in an ironclad way. It doesn't prevent anyone from giving away his services entirely or charging more than the fee bill schedule. It is adopted as a guide for surgeons and general practitioners. The following schedule is approximately what was adopted some ten years ago:

SCHEDULE OF PRICES

Services	Fee for Poor, Reduced Rates	Moderate Prices	Difficult Cases
General			
Examination	$5.00	$10.00	$25.00
Treatment at office	2.00	3.00	5.00
Calls out, day time in city	3.00	4.00	6.00
Calls out, after 10 p. m.	5.00	8.00	10.00
Consultation with another physician	5.00	10.00	20.00
Old line life insurance examination	5.00	10.00	20.00
Fraternal life insurance examation	2.00	5.00	10.00
Detention on cases, per hour	5.00	10.00	20.00
Joint attention, each physician	2.00	3.00	4.00
Contagious diseases, calls	4.00	6.00	8.00
Written advice or certificate of health	2.00	5.00	10.00
Expert witness fee, per day	25.00	50.00	100.00
Vaccination at office (for smallpox)	1.00	2.00	3.00
Postmortem examination	10.00	25.00	50.00

Note: We are glad to do charity work for the worthy poor. Every one appreciates a doctor's services more, if they pay something. A small fee should be charged charity patients for operating room, supplies, help and anesthetic. In column one are very nominal charges; column two, moderate prices as charged by best specialists; column three, prices for difficult cases. If people of wealth will also pay fees in column three we can better afford to aid the poor. In making charges, do justice to both patient and surgeon. Unless people are hard pressed they should pay the fees in column two.

Emergency poisoning, etc.	5.00	10.00	25.00
3 doses diphtheria toxin-antitoxin	3.00	4.50	6.00
Physiotherapy			
Galvanism, Vibration, Quartz light (air-cooled and water-cooled) Morse-Wave, Polysine, Diathermy (Oudin, Tesla, D'Arsonval) Auto-condensation (Tesla, D'Arsonval) Zoalite, Radiant light, Incandescent-light Cabinet. One modality, per treatment	2.00	3.00	5.00
(When more than one modality is used a combination price will be made)			
Eye			
Chalazion	10.00	20.00	40.00
Pterygium	75.00	100.00	150.00
Tenotomy	75.00	150.00	200.00
Advancement	100.00	200.00	350.00
Trephining eye in glaucoma	150.00	250.00	350.00
Iridectomy	150.00	200.00	250.00
Trachoma operation	150.00	200.00	250.00
Larchrymal sac operation	100.00	150.00	200.00
Enucleation of the eye	100.00	150.00	200.00
Refraction	5.00	10.00	25.00
Removal of foreign body from cornea or conjunctiva	2.00	5.00	20.00
Removal of foreign bodies from interior of eye	25.00	50.00	150.00
Operation for cataract	100.00	150.00	300.00
Ear, Nose and Throat			
Removal of foreign bodies, ear, nose	5.00	10.00	25.00
Paracentesis (myringotomy)	5.00	10.00	25.00
Cautery operations	10.00	17.50	25.00
Amputation of uvula	10.00	20.00	30.00
Intubation	50.00	150.00	300.00
Tracheotomy	75.00	150.00	300.00
Tonsillectomy—local anesthetic	60.00	100.00	150.00
Tonsillectomy—general anesthetic	75.00	125.00	175.00
Adenoids—general anesthetic	25.00	50.00	75.00
Nose-Pharynx operation	30.00	60.00	100.00
Turbinate bones operation	50.00	100.00	150.00
Submucous resection	80.00	150.00	200.00
Polyps—one side	50.00	75.00	100.00
Polyps—both sides	75.00	100.00	150.00
Draining antrum of highmore	25.00	50.00	75.00
Draining sphenoid sinus	25.00	50.00	75.00
Radical operation on frontal sinus	75.00	150.00	200.00
Radical operation on antrum	75.00	150.00	200.00
Radical operation on sphenoid	75.00	150.00	200.00
Harelip	100.00	150.00	200.00
Cleft palate	200.00	250.00	300.00
Plastic operations on face	50-100	100-400	400-1,000
Mastoid	150.00	300.00	500.00
Ossiculectomy	75.00	125.00	175.00
(a) Orificial Surgery			
Complete examination	5.00	10.00	15.00
Circumcision (female)	25.00	35.00	50.00
Labiectomy	25.00	35.00	50.00
Carunculæ (urethral and hymenal)	25.00	35.00	50.00
Curettage	25.00	50.00	75.00
Recto-Vaginal fistula	75.00	100.00	150.00
Perineorraphy	75.00	100.00	150.00
Trachelorraphy	75.00	100.00	150.00
Vulvoplasty	75.00	100.00	150.00
Circumcision (male)	25.00	35.00	50.00
Hypospadias	50.00	75.00	100.00
Frenotomy	5.00	10.00	15.00
Meatotomy	5.00	10.00	15.00
Stricture (urethral)	25.00	50.00	75.00
Hydrocele	25.00	50.00	75.00
Varicocele	25.00	50.00	75.00
Prostatectomy	100.00	200.00	300.00
Divulsion of sphincter ani	35.00	50.00	75.00
Fissure in ano	35.00	50.00	75.00
Anal papillæ (excision or fulguration)	15.00	25.00	50.00
Polypus	15.00	25.00	50.00
Anal pockets	25.00	50.00	75.00
Fistula in ano	50.00	75.00	100.00
External and middle hemorrhoids	50.00	75.00	100.00
Pruritus ani	50.00	75.00	100.00
Where more than one operation is done at one sitting a combination price is made.			
(b) General Surgery			
Administering anesthetic	5.00	10.00	25.00
Paracentesis of abdomen	10.00	25.00	50.00
Reduction of hernia	5.00	10.00	25.00
Trephining	100.00	200.00	400.00
Resection of ribs	75.00	150.00	200.00
Dressing of wounds	2.00	5.00	10.00
Minor operations	10.00	25.00	50.00
Abdominal and thoracic operations	100.00	200.00	500.00
Reducing dislocation of fingers and toes	5.00	15.00	35.00
Reducing dislocation of larger bones	50.00	100.00	150.00
Ununited or compound fracture	100.00	200.00	300.00
Operation for necrosed bone	50.00	100.00	200.00
Amputation—minor	25.00	50.00	100.00
Amputation—major	100.00	150.00	300.00
Operations on blood vessels and lymphatics	25.00	50.00	100.00
Ordinary labor and abortions and three visits	25.00	50.00	100.00
Instrumental or abnormal delivery	50.00	75.00	150.00
X-Ray Work			
Hand	3.00	5.00	7.50
Wrist	3.00	5.00	7.50
Foot	3.00	5.00	7.50
Ankle	3.00	5.00	7.50
Forearm	5.00	7.50	10.00
Elbow	5.00	7.50	10.00
Knee	5.00	7.50	12.50
Shoulder	7.50	10.00	12.50
Thigh	7.50	10.00	15.00
Hip	10.00	15.00	20.00
Chest	8.00	10.00	15.00
Eye	5.00	7.50	10.00
Head	8.00	10.00	15.00
Sinuses	8.00	10.00	15.00
Mastoid	8.00	10.00	15.00
Spine	8.00	10.00	15.00
Kidney and bladder	8.00	10.00	15.00
Gall bladder (capsules)	8.00	10.00	15.00
Stomach and intestines	20.00	30.00	40.00
Teeth	10.00	15.00	20.00
Extra films	1.00	3.00	5.00
Laboratory			
Urinalysis	1.00	2.00	3.00
Quantitative Urinalysis	2.00	3.00	5.00
Blood count (complete)	3.00	5.00	7.00
White and differential blood count	2.00	3.00	4.00
Coagulation	.50	1.00	2.00
Hemoglobin	.50	1.00	2.00
Sputum	3.00	5.00	7.00
Stained smears	2.00	3.00	4.00
Desensitization test	8.00	10.00	12.00
Urea	3.00	4.00	5.00
Blood sugar	3.00	4.00	5.00
Creatinine	3.00	4.00	5.00
Renal function	4.00	5.00	6.00
Blood hyping	4.00	5.00	6.00

Patient Types . . .

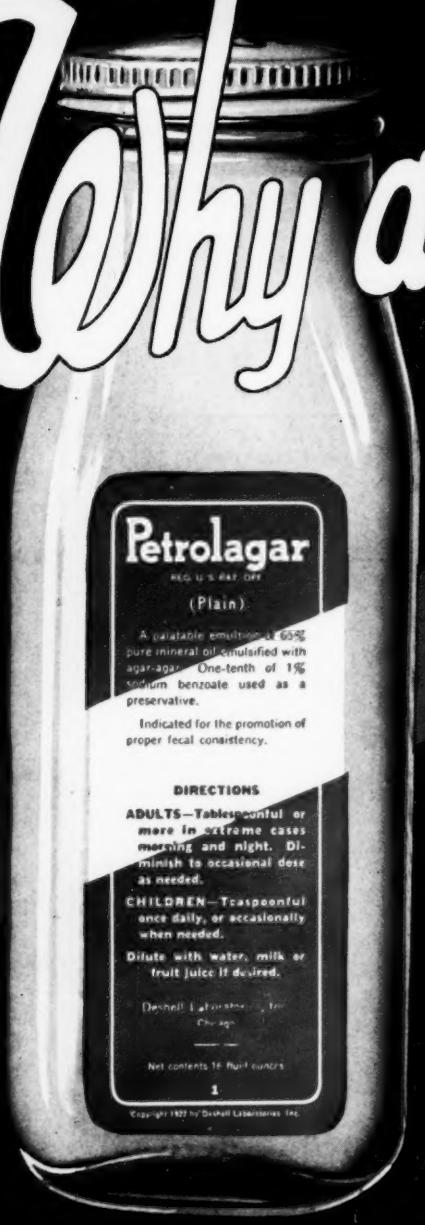
The Hospital Case

Confined to the bed, weak and nervous, the hospital patient under your care is hardly a fit subject for the old-fashioned drastic purge.

Petrolagar has many advantages in maintaining bowel function. It is palatable and does not interfere with digestion. It produces normal, soft-formed fecal consistency, providing real comfort to bowel movement.

Petrolagar

Why an emulsion


Petrolagar
(Plain)
A palatable emulsion of 65% pure mineral oil emulsified with agar-agar. One-tenth of 1% sodium benzoate used as a preservative.
Indicated for the promotion of proper fecal consistency.
DIRECTIONS
ADULTS—Tablespoonful or more in extreme cases morning and night. Diminish to occasional dose as needed.
CHILDREN—Teaspoonful once daily, or occasionally when needed.
Dilute with water, milk or fruit juice if desired.
Net contents 16 fluid ounces
1

Petrolagar affords a valuable aid to diet and exercise in bringing about a restoration of normal bowel movement — the effect being purely mechanical.

Petrolagar simply acts by permeating the intestinal content to produce a soft-formed, yielding mass in the bowel.

Petrolagar has many advantages over plain mineral oil. It is more palatable; it easily mixes with bowel content with less danger of leakage and does not interfere with digestion.

Petrolagar is composed of 65% (by volume) mineral oil with the indigestible emulsifying agent, agar-agar.

Deshell Laboratories, Inc.,
536 Lake Shore Drive,
Chicago **Dept. B. 2**

Gentlemen: — Send me copy of the new brochure "HABIT TIME" (of bowel movement) and specimens of Petrolagar.

Dr......

Address.....

.....

Petrolagar

Blood culture	8.00	10.00	12.00
Basal metabolic rate	8.00	10.00	12.00
Gall bladder drainage	3.00	5.00	7.00
Gastric analysis	3.00	5.00	7.00
Differential count	3.00	5.00	7.00
Feces, blood fat, organisms, complete	3.00	5.00	7.00
Milk analysis, complete	3.00	5.00	5.00

State and Divisional News

OSTEOPATHIC CONVENTIONS

Announcements

CALIFORNIA

Northern California Osteopathic Association

The California Osteopathic Association, northern section, held its mid-winter session, Saturday, January 5, in San Jose. The program, over which Dr. F. O. Edwards, San Jose, presided, was as follows:

Dr. A. V. Kalt, Pasadena, "Inflammation of the Upper Respiratory Tract in Its Relation to Deafness (1) The Mechanism of Hearing, (2) The General Practitioner and Deafness."

Dr. Louisa Burns, Los Angeles, "Upper Thoracic Lesions and Their Effects: (1) On the Eye; (2) On the Nasopharyngeal Region."

Dr. C. H. Downing, San Francisco, "Technic for Correcting Thoracic Lesions."

Dr. A. T. Seymour, Stockton, "Some Problems of the Profession."

Dr. L. van H. Gerdine, Los Angeles, "Degeneracy in Children and Its Differentiation from Functional Nervous Disorders." Also a radio address.

Dr. H. E. Penland, Berkeley, "The Ductless Glands in Osteopathic Practice."

Dr. J. Goodfellow, Oakland, whose subject was announced later.

Los Angeles Osteopathic Society

Mrs. Jean Morris Ellis, vocational guidance expert, was the speaker at the December meeting of the Los Angeles Osteopathic Society, held in the gymnasium of the College of Osteopathic Physicians and Surgeons.

Dr. Merrill read a letter that had been sent to all the schools by the Health Department, saying that only doctors of medicine could sign school readmittance cards. Dr. Crist explained that legally, all holders of physician and surgeon licenses are included in that category, but that of course the wording was misleading. It was voted to send a letter to the Health Commission requesting them to send out another letter to the schools, with the words "physicians and surgeons, medical or osteopathic," used instead of "doctors of medicine."

The January meeting of the Los Angeles Osteopathic Society was held at the College of Osteopathic Physicians and Surgeons. Mr. Dale H. Parke, attorney, spoke on "The Relation of the Doctor to the Local Court," and Mr. Samuel W. McNabb, United States District Attorney on "The Physician's Responsibility to the Federal Courts."

The question of the feasibility of having an osteopathic physicians' exchange, independent of the medical exchange, was discussed.

The Los Angeles Society will be hosts to the southern division of the State Society in February, and therefore there will be no local city meeting next month.

Oakland Osteopathic Physicians' and Surgeons' Club

Dr. Gertrude Smith, Alameda, spoke on "Spinal Meningitis" at the meeting of the club on January 3. Round-table discussion followed this address.

On January 10 newly elected officers were installed. They are: President, Dr. K. E. Palmer, Berkeley; vice-president, Dr. M. Rogers, Oakland; secretary, Dr. E. C. Darnell; directors, Dr. J. Goodfellow, Oakland, and Dr. R. A. Peters, Berkeley.

Dr. J. H. Bell, Oakland, was the chief speaker at the meeting on January 18.

Dr. R. A. Peters, Berkeley, spoke on "Cerebral Hemorrhage" at the meeting on December 20.

Orange County Osteopathic Society

The Orange County Society meeting was addressed by Rev. Dr. Hurlburt, former missionary to Africa, at its meeting on December 15 in the office of Dr. Hester Olewiler at Santa Ana. He stressed the need for betterment of health conditions among the tribes of Africa.

Pasadena Osteopathic Society

Dr. H. W. Forbes, Los Angeles, addressed the meeting of the society on December 6. His subject was "Cerebrospinal Meningitis."

COLORADO

Colorado Springs Osteopathic Society Clinic

A clinic was conducted by the Colorado Springs Osteopathic Society at the Cliff House, Manitou, on January 12. The program follows:

Opening, Dr. H. E. Lamb, President.

"Throat and Nose Disease and Treatment," Dr. P. D. Schoonmaker, Colorado Springs.

"Osteopathic Diagnosis," Dr. Rodney Wren, Pueblo.

"Obstetrics," Dr. N. E. Atterberry, Denver.

"Treatment of Winter Diseases," Dr. J. P. O. Givens, Colorado Springs.

"Physio-Therapy," Dr. C. A. Cluff, Denver.

Dinner, Dr. M. Freda Lotz, Toastmistress.

FLORIDA

Dade County Osteopathic Society

The newly elected officers of the Dade County Society are as follows: President, Dr. C. G. Tillman, Miami; vice-president, Dr. L. M. Gahan, Miami; secretary and treasurer, Dr. Nancy M. Haines, Miami; directors, Dr. G. M. Smith, Dr. Cecil Ferguson, Dr. L. K. Tuttle; information committee, Dr. W. D. Sigler.

IOWA

First District

The First District Society met on December 6 and elected the following officers: President, Dr. A. M. Friend, Independence; vice-president, Dr. Charlotte MacDougal, Iowa City; secretary, Dr. Paul O. French, Cedar Rapids; trustees, Dr. F. C. Leffering, Waterloo; Dr. H. B. Willard, Manchester, and W. M. Furnish, Tipton. Convention preparations were discussed.

INDIANA—MICHIGAN

St. Joseph Valley Osteopathic Association

Thirty-two osteopathic physicians attended the meeting of the association on January 17, at Niles, Michigan. Discussion centered on the proposed changes in the law regarding the practice of osteopathy in Michigan. The next meeting will be held in Elkhart, Indiana, on February 21, at the Hotel Elkhart.

MICHIGAN

Grand Rapids Society of Osteopathic Physicians and Surgeons

Dr. R. T. Lustig read a paper on "Hyperthyroidism" and Dr. C. B. Root led the discussion on "Influenza" at the meeting of the Society on January 11 at the home of Dr. J. C. Simons. Plans were formulated for the Michigan State Society meeting in Grand Rapids in the fall.

MASSACHUSETTS

Worcester District Osteopathic Society

The Worcester society elected the following officers at the meeting on December 12: President, Dr. J. H. Sprague; vice-president, Dr. W. L. Jones; treasurer, Dr. H. P. Frost; secretary, Dr. Olive Williams; clinic committee, Dr. L. M. Bishop, Dr. Jones and Dr. Sprague.

MISSOURI

Four-County Osteopathy Society

The Four-County Society met on January 3, when Dr. C. A. Brink, Kirksville, spoke on "The Effects of and Antidotes for the Common Poisons Used with Suicidal and Homicidal Intent." Dr. T. O. Pierce, St. Joseph, spoke on "Treatment of the Non-surgical Chronic Case as Administered in St. Joseph."

Western Central Osteopathic Association

Dr. J. H. Hardy, Columbia, spoke on "Pelvic Disturbances" and Dr. L. B. Lake, president of the state association, made an address, at the meeting of the Western Central Association at Sedalia on December 11. The following officers were elected: President, Dr. R. H. Nuckles, Slater; vice-president, Dr. L. A. Glaze, Sedalia; secretary-treasurer, Dr. Edith Salmon, Appleton City.

Buchanan County Osteopathic Society

The Buchanan County Society sent a letter to the hospitals of St. Joseph requesting that licensed osteopathic physicians and surgeons of Missouri be given the same privileges in the hospitals as are extended to medical physicians and surgeons, on January 15. The matter has been taken under consideration by the various hospitals, according to the report.

NEBRASKA

Nebraska Osteopathic Association

The Nebraska Association has started the new year with the establishing of a Bulletin, to be issued quarterly, and edited by Dr. H. E. Litton, newly elected secretary of the organization. Other officers elected at the Lincoln convention are as follows: President, Dr. H. R. Shickley, Lincoln; vice-president, Dr. H. I. Magoun, Scottsbluff; treasurer, Dr. Angela McCreary, Omaha; delegates to the A. O. A. convention, Drs. F. A. Barger and G. C. Widney with alternates, Drs. Chas. Hartner and W. K. Stefan.

NEW YORK

Rochester District Osteopathic Society

Dr. D. L. Clark addressed the meeting of the Rochester Society on January 12. Dr. Clark's subject was "Importance of Osteopathic Treatments in the Care of 'Flu' and Other Diseases."

Hudson River Osteopathic Association

"Infections" was the title of a paper by Dr. W. C. Davis, Troy, and which was the principal address at the meeting of the Hudson River Association at its meeting on January 6. Dr. Albert Bailey gave a book review.

City of New York

The January meeting was held on the 19th and the program was as follows:

Dr. J. H. Sullivan, Chicago, "Osteopathy (Thirty Years Drugless)."

Dr. Edward A. Green, Philadelphia, "Osteopathic Educational Methods."

Western New York Osteopathic Society

Dr. Leary, Buffalo, addressed the meeting held on December 15, on the subject of "The Psychological Aspect in the Training of Children."

NEW JERSEY

The meeting, held on December 8th, had the following program: Dr. George Taplin, Boston, "Affections of the Knee Joint and Special Treatment of Water on the Knee"; Dr. Robert Barber, Ardmore, Pa., "Sacro-Iliac Displacements and Their Corrections"; business session.

The January meeting was held in Trenton on the 5th, with Dr. O. J. Snyder as the principal speaker. The members of the Southern New Jersey Osteopathic Society were the guests.

OHIO

Cleveland District

On December 3 the regular monthly meeting was held. Drs. Keckler, Kerr and Cacilo discussed the subject for the evening, "The Problems of the Profession."

Dr. C. J. Gaddis, Chicago, addressed the members of the society, urging osteopaths to "war against war" and also discussed the problems of the profession from the viewpoint of the national organization.

Cincinnati District

The society met in the offices of Drs. R. B. and R. C. Robbins on December 14, where a general program of interest was presented.

Fourth (Columbus) District

Dr. C. J. Gaddis, Chicago, held a clinic in the offices of Dr. C. M. LaRue on January 10. Dr Gaddis also addressed the meeting of the members of the Central Ohio Osteopathic Association on Wednesday, January 10.

Fifth (Dayton) District

The Dayton Society met on January 11 and were addressed by Dr. C. J. Gaddis on "The Challenge of the Unachieved." Dr. Gaddis also addressed the Noontide Club on "The Conservation of Youth."

PENNSYLVANIA

Central Pennsylvania District

Dr. D. L. Clark, Denver, Colo., gave a practical demonstration of methods at the meeting of the Central District Society on January 8 in Harrisburg.

Philadelphia County Society

Dr. D. L. Clark, Denver, was the guest of honor at the meeting of the society on January 9. Dr. Clark participated in the ground-breaking for the new college and hospital buildings of the Philadelphia College of Osteopathy.

RHODE ISLAND

Rhode Island Osteopathic Society

At the meeting of the society on January 10 in Providence, Dr. D. L. Clark was the principal speaker, and Dr. Ruth Humphries of Waltham, Mass., also spoke on "The Treatment of Autointoxication."

WASHINGTON

Bellingham Osteopathic Association

The meeting on December 5 was devoted to an extensive discussion of spinal curvature, led by Dr. I. M. Bundy. Treatment of eye conditions was demonstrated by Dr. G. H. Parker at the meeting on December 12. Dr. Katherine Gloman discussed birth palsy and its correction, demonstrating with a typical case, at the meeting on December 19. The first meeting of the new year on January 3 gave consideration to the newest instruments and uses of physiotherapy, with the discussion led by Dr. J. W. Kaylor.

WEST VIRGINIA

Monongahela Valley Osteopathic Association

On December 14 the association met in the offices of Dr. W. E. Montgomery, Clarksburg. The principal paper was given by Dr. A. B. Smith, Fairmont, on "Proctology." The program for the meeting of the association on January 10 was as follows: Dr. G. O. Smith, Morgantown, "Epidemiology and Etiology;" Dr. A. B. Smith, Fairmont, "Symptoms of the Various Forms;" Dr. H. I. Miller, Morgantown, "Complications and Relapse;" Dr. G. E. Morris, Clarksburg, "Differential Diagnosis;" Dr. R. E. Coda, Fairmont, "Prophylaxis with Especial Emphasis on the Second Wave;" Dr. J. D. Miller and Dr. I. M. Austin, Morgantown, and Dr. L. LeMasters, Fairmont, "Manipulative Treatment of Influenza;" Dr. W. E. Montgomery, Weston, "Dietetics and Nursing in Influenza;" Dr. L. F. Price, Clarksburg, "Hydro-Therapy in the Treatment of Influenza;" Dr. W. P. Gandy, Clarksburg, "Control of Symptoms." All papers were devoted to the subject of influenza.

WISCONSIN

Milwaukee Osteopathic Society

"Principles of Technic" was the subject of Dr. Virgil Halladay's talk at the meeting of the Milwaukee Society on December 8. Dr. Halladay has been speaking before the coaches of the various colleges as well as the osteopaths of Wisconsin.

CANADA—ONTARIO

The semi-annual convention of the Ontario Association was held on November 21. Dr. S. V. Robuck, Chicago, discussed conditions of the lower intestines and their relation to eye trouble, position and size of stomach and their relation to health, and the necessity for plenty of rest. Dr. E. S. Detwiler of London read a paper on "Tabulation of Case Records," and Miss B. Mossop led a discussion on the value of vitamins in general diet.

Dioxogen

There are in every physician's practice occasions where a harmless but effective germicide is required.

In such cases Dioxogen is very useful, particularly with children, where its harmlessness precludes the possibility of error and its simplicity of application makes it easy to use.

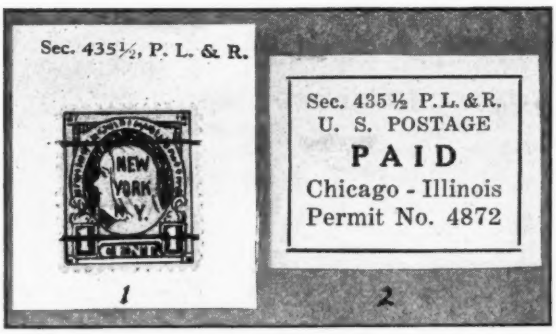
Dioxogen is a positive germicide, it kills pathogenic bacteria, even the spore forming varieties are destroyed by contact with Dioxogen and yet it is as harmless as water.

Physicians are urged to try Dioxogen whenever a harmless but reliable disinfectant or antiseptic is indicated.

Free sample will gladly be sent
to professional men on request

The Oakland Chemical Co.

59 Fourth Avenue New York, N. Y.



How to Mail Health Factors

HEALTH FACTORS is rated as third-class matter and must be mailed subject to the revised postal laws and regulations effective July 1, 1928.

Less than 200 copies go for one and one-half cents each, in an unsealed envelope.

A rate of *one cent* each may be obtained for quantities of *over 200,* providing certain requirements are carefully observed. See your postmaster and obtain a permit either to mail them with pre-cancelled stamps, using the indicia shown in Figure 1, or by prepaying the postage by certified check, in which case print the indicia shown in Figure 2 in the upper right corner of the envelope. In either case your return card should be printed in the upper left corner of the envelopes.

HEALTH FACTORS fits the ordinary business envelope, known as a six and three-quarter size, which can be purchased in cheap grades from any stationer or printer. The A. O. A. does not provide envelopes for HEALTH FACTORS.

Your postmaster will inform you about making a statement of mailing.

RESEARCH INSTITUTE PUBLICATIONS

OSTEOPATHIC TREATMENT OF CHILDREN'S DISEASES. Uniform in style and binding, with Clinical Osteopathy. 823 pages. Edited by Ira W. Drew, D.O. Very practical and very osteopathic. Price $5.50.

CLINICAL OSTEOPATHY. Very practical and very useful and osteopathic. Edited by Carl P. McConnell, D.O. 643 pages. Price $4.00.

PUBLIC SANITATION AND OTHER PAPERS. By Clement A. Whiting, D.O. Includes reports of original studies in osteopathic problems. Price $3.00.

STUDIES IN THE OSTEOPATHIC SCIENCES. A series of books by Louisa Burns, D.O. Basic Principles, 350 pages, devoted to general discussions and reports of experiments; Nerve Centers, devoted to the spinal and bulbar centers with especial reference to osteopathic relations; Physiology of Consciousness, an interpretation of mental phenomena in anatomical terms. Three books. Price $4.00 each.

BULLETINS OF THE INSTITUTE

Bulletin No. 1. "A Record of Beginnings." Freely illustrated. Price $2.00.

Bulletin No. 2. Miscellaneous papers, chiefly by Dr. J. Deason and his assistants. Price $2.00.

Bulletin No. 3. Devoted to Diseases of Ear, Nose and Throat. J. Deason, D.O., and assistants. Illustrated in color, by F. P. Millard, D.O. Price $2.50.

Bulletin No. 4. Pathology of the Vertebral Lesion. Drs. Burns, Slosson and Hoskins. Freely illustrated. Price $2.00.

Bulletin No. 5. Effects of Lumbar Lesions. Freely illustrated. Drs. Burns, Hoskins and Slosson. Price $2.00.

Bulletin No. 6. "Growth Changes Due to Vertebral Lesions." Paper cover, 123 pages, 15x22.5 cm. Price $2.00.

This is the latest report to be published by the Research Institute. In addition to the matter dealing with the subject used for the title of the book, the volume contains miscellaneous papers on such subjects as Bony Lesions and Neoplasms, Fibrinolysis and Malignancy, Development, Obesity, Bony Lesions and Infections, and Clinic Reports on various diseases.

AMERICAN OSTEOPATHIC ASSOCIATION
844 Rush Street, Chicago.

Prices of the OSTEOPATHIC MAGAZINE

Now Mails for ONE CENT

	200 or more	Under 200.
In bulk	$5.00 per 100	$6.00 per 100
To list	6.50 per 100	7.00 per 100

Save time and postage by sending us your list.

Important Facts About O. M.

It is entered as second-class matter and consequently is subject to the following postal rules:

When sent to you in bulk:

It may carry the professional card on back cover.
Blank envelopes included. (White envelopes 25 cents a hundred extra.)
Costs you one cent per copy to mail (transient second-class calls for one cent for each two ounces, or fraction thereof).
Imprinting your own return address on envelope, $2.50 per 1,000 extra. No orders for less than 2,000.
No enclosures permitted.

When mailed by us to your list:

No professional card permitted.
Your return address cannot be printed on envelope.
Publisher's return with "Return Postage Guaranteed" is printed on envelope. You will be advised promptly of undelivered magazines.
Mailed at publisher's second-class rate.
No enclosures permitted.

AMERICAN OSTEOPATHIC ASSOCIATION,
844 RUSH STREET, CHICAGO.

Date.....

Please send.....copies OSTEOPATHIC MAGAZINE .....issue.

CHECK SERVICE WANTED

☐ Annual Contract ☐ Mail to List
☐ Single Order ☐ With Professional Card (Less than 50 not imprinted)
☐ Deliver in Bulk ☐ Without Professional Card

(Attach copy for Professional Card)

Name .....

Address .....

City..... State.....

PRICES of OSTEOPATHIC HEALTH

⟶ *It Mails for One Cent Per Copy* ⟵

On ANNUAL CONTRACT, delivered to your office by parcel post or prepaid express

With Your Professional Card		Without Professional Card	
100 copies	$ 3.75	100 copies	$ 3.50
200 "	7.50	200 "	7.00
300 "	11.25	300 "	10.50
400 "	15.00	400 "	14.00
500 "	17.50	500 "	17.50
1,000 "	32.50	1,000 "	32.50

All orders for less than 50 on either single order or contract at rate of $4.75 per hundred.

Quantities between 600 and 1,000 copies at the rate of $3.25 per hundred, with or without your professional card.

On ANNUAL CONTRACT, address and mailed to your list of names

With Your Professional Card		Without Professional Card	
100 copies	$ 5.25	100 copies	$ 5.00
200 "	10.50	200 "	10.00
300 "	15.75	300 "	15.00
400 "	21.00	400 "	20.00
500 "	25.00	500 "	25.00
1,000 "	47.50	1,000 "	47.50

On SINGLE ORDER, delivered to your office by parcel post or prepaid express

With Your Professional Card		Without Professional Card	
100 copies	$ 5.25	100 copies	$ 4.75
200 "	10.50	200 "	9.50
300 "	15.75	300 "	14.25
400 "	21.00	400 "	19.00
500 "	23.75	500 "	22.50
1,000 "	45.00	1,000 "	42.50

On SINGLE ORDER, addressed and mailed to your list of names

With Your Professional Card		Without Professional Card	
100 copies	$ 6.75	100 copies	$ 6.25
200 "	13.50	200 "	12.50
300 "	20.25	300 "	18.75
400 "	27.00	400 "	25.00
500 "	31.25	500 "	30.00
1,000 "	60.00	1,000 "	57.50

Envelopes free. Delivery in bulk free. No advertising but your own. Every Osteopathic Health bearing your professional card is like "a special edition for you."

AMERICAN OSTEOPATHIC ASSOCIATION,

844 Rush Street, Chicago

Date.....

Please send.....copies Osteopathic Health.....issue.

CHECK SERVICE WANTED

☐ Annual Contract ☐ Mail to List
☐ Single Order ☐ With Professional Card (No orders under 50 imprinted)
☐ Deliver in Bulk ☐ Without Professional Card

Attach copy for professional card.

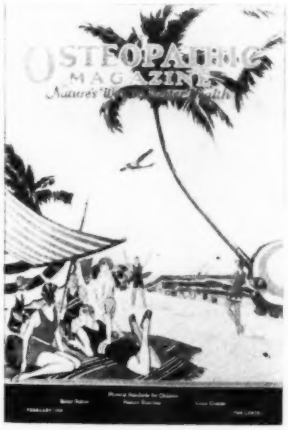
Name ..... Address .....

City ..... State .....

THE BABY is the central figure in the February O. M. Never have we issued more charming pictures of the home's "living poems."

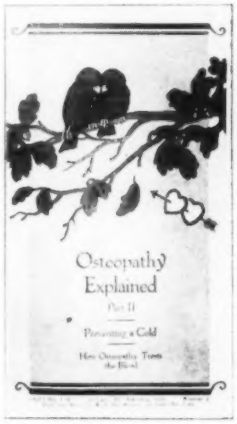
POSTURE, just as important in its way as diet, work and play, and affecting all of them, is another subject given special prominence.

HEALTH is osteopathically discussed in many different phases.



FEBRUARY O. M.

THESE bright, handy, monthly messengers play many parts – furthering the all-important cause of health in the home, spreading the osteopathic concept and reporting osteopathy's progress, reminding patients and others that the sender is on the spot to give osteopathic service, giving readers a pleasure to anticipate regularly, and so on.



FEBRUARY O. H

OSTEOPATHY EXPLAINED, Part II, fills 12 pages of the February O. H. "PREVENTING A COLD" and "HOW OSTEOPATHY TREATS THE BLOOD" are two most timely and practical articles for health seekers.

Send marked copies of these attractive issues to a picked list of patients. Read of the results this brought one doctor, page 24.

American Osteopathic Association :: :: :: 844 Rush Street, Chicago

4 Pages of Information and Guidance on Health

MONTHLY

HEALTH FACTORS

On the trail to the dawn of better living

Pictures of Osteopathic Institutions and People

MONTHLY

Numbered but not dated HEALTH FACTORS is never out of date

No. 5, for instance, with 2 pages on Influenza Prevention, also cut and story of Osteopathic Unit in Los Angeles County Hospital, should be read in every home now. No. 7, an issue of rare interest, has a view of Lakeside Hospital, group of Philadelphia students and reproduction of the famous Roosevelt letter.

SLIP ONE INTO EVERY LETTER YOU MAIL—SEND FOR SAMPLES

HUNDREDS OF DOCTORS

are getting this attractive

LITERATURE RACK

Brightens your office and helps you to deliver the message of osteopathy to every caller. Keeps your literature clean and accessible.

20 inches wide by 30 inches high

Four all-steel ledges and guards electrically welded to sides of frames. Green board backing. Strong, durable and attractive. Chain for hanging.

Two "Take One" legends are painted on every rack.

PRICE, $5.00

Sent anywhere in the U. S. A. only, express charges collect.

GET ONE NOW

Free offer for limited time only, details below.

SPECIAL OFFER TO O. M. AND O. H. USERS

This attractive fixture will be sent FREE to those who place new orders for 200 or more copies a month for a year; or, to all now using 200 or more a month on an annual contract, who increase their orders by 50 or more per month. It will be sent express charges collect.

NOTE: To help you keep your rack filled we will give special discounts on back issues of O. M., O. H. and other Literature, if you purchase a rack or get one as a premium with your yearly contract.

AMERICAN OSTEOPATHIC ASSOCIATION, 844 RUSH ST., CHICAGO

Here it is! The Sunbeam Arc Lamp

A fifteen dollar Therapeutic arc lamp that beats them all. This fully automatic lamp burns over thirty minutes without any attention or adjustment. The Sunbeam arc lamp is just what is needed for Therapeutic work. Will burn ultra violet (sunshine) carbons as well as all other types including infra-red. Can be used in the laboratory or quickly packed away for portable use when treatments are given patients in their home. Beautifully made of satin finished aluminum with built-in rheostat thus making one complete unit. Operates on 110-125 volts direct or 60 cycle alternating current. Attach to any electric light socket and the lamp is ready for use. A fifteen-foot cord is also furnished with the lamp.

LAMP ONLY

$15

PRICES

Sunbeam Arc Lamp	$15.00
Nickel Plated 6-ft. Folding Stand	2.50
Goggles for protection of the eyes	.50

Eveready Sunshine and Therapeutic Carbons

These Therapeutic Arc Carbons are designed to produce health giving rays when properly applied.

For full information covering the medical uses of these carbons write for our special circular O. P. T.

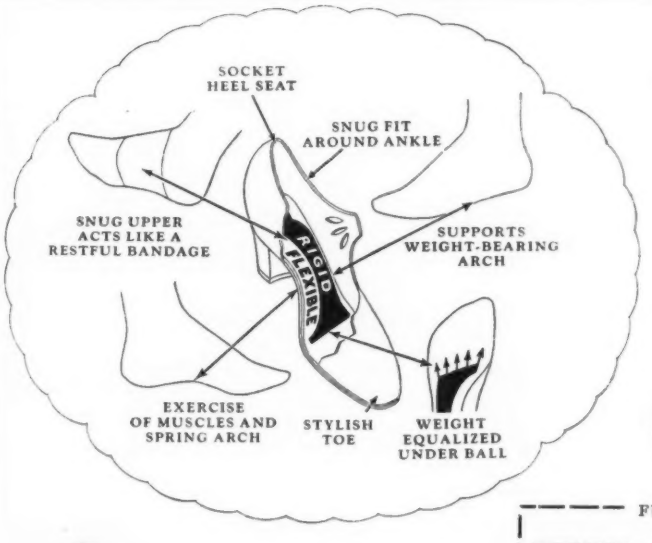
	6 mm. Sunshine	"B" Carbon	"C" Carbon	"D" Carbon	"E" Carbon	"F" Carbon	"G" Carbon	"H" Carbon	"K" Carbon
6 inch									
Net Price per doz.	$1.25	$1.25	$1.60	$1.15	$1.50	$2.35	$1.60	$1.20	$2.85

DEALERS WANTED

Manufactured and Guaranteed by

BURKE & JAMES, Inc., CHICAGO

ESTABLISHED 1897



Osteopathy

is benefiting hundreds of new Foot Patients *through*

Foot-Friend Clinics

FULL INFORMATION ON REQUEST

A Dignified Way to Increase One's Foot Practice—

has been developed by Dr. John M. Hiss, D.O., M.D., designer of the Foot Friend Shoe construction. Interesting information is available concerning this foot clinic method, which is now operating successfully in Detroit, Toledo, Denver, Cleveland, Lakeland (Fla.), and many other cities.

THE LAPE & ADLER CO.

COLUMBUS, OHIO.

Please send me without charge and no obligation:

1. Establishing a Foot Practice, by Dr. John M. Hiss, D.O.
2. Treatment and Care of the Feet, by Dr. John M. Hiss, D.O.
3. Operating a Foot Clinic, by The Lape & Adler Co.

SIGNED .....

ADRESS .....

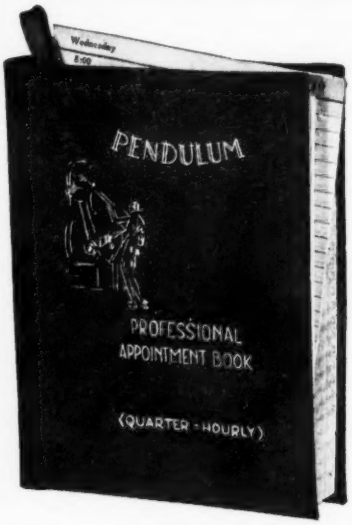
A Record Sheet for Childhood and Adolescence

Designed for the periodic examination of children and developing youth. Enlarged to include the requisites of child-study in collaboration with educational movements. A simple, straightforward record sheet suitable for a special purpose.

Lay students desiring to evaluate osteopathic principles must have access to scientific records covering at least a thousand cases which bear upon any particular problem.

Price two dollars per hundred.

Jennie Alice Ryel, D. O.
40 Passaic St.
Hackensack, New Jersey



Pendulum Appointment Book

CONTINUOUS
CONVENIENT
COMPACT

Arranged in Quarter-Hour Periods. You can commence the book any time. The day of the week printed. User fills in date and year. Hours of day from 8:00 A. M. to 8:15 P. M., listed.

Special Features

Not a looseleaf book.
A telephone directory—room for 200 names.
A blank page at the end of each week for a summary.
An attractive book mark.
A list of dates to remember.

A handsome book of 416 pages, size 6¼x4½, beautifully and artistically bound in green art vellum with gold lettering.

A new idea in an appointment book that you will appreciate. A volume of convenient size that you will delight to handle

Price $1.50

Send cash with order to

American Osteopathic Association
844 RUSH ST., CHICAGO, ILL.

AFTER ALL

Isn't it a fallacy attempting to "kill off" bacterial invaders of mucous tissues with corrosives when one pauses to consider that once a tissue has become infected, very little time elapses before the invading hosts penetrate to the deeper cell layers, where it virtually is impossible to reach them with germicides?

Isn't it more logical to combat infection or irritation with ALKALOL, which is non-toxic and non-injurious, internally or externally? It befriends gamely fighting tissue by dissolving accumulation and through its hypotonicity, correct alkalinity and salinity acts as an assistant to Nature's method of healing.

ALKALOL is bland, balanced to insure absorption and wonderfully soothing. Easily proven by using in your own nose or eyes for irritation or exposure to dust or other debris.

SHALL WE SEND SOME FOR PERSONAL TRIAL?

Mail the Coupon

Alkalol Company, Taunton, Mass.

Gentlemen: Please send me a sample of ALKALOL.

Dr.....

Address.....

J.A.O.—F

THE ALKALOL CO.
Taunton, Mass.

CHANGES OF ADDRESS

Adams, Floyd W., from New Canaan, Conn., to 363 Main St., Middletown, Conn.

Bailey, S. L., from 516 Fifth Ave., to the New French Bldg., 551 Fifth Ave., New York, N. Y.

Bieneman, J. C., from La Salle, Ill., to 512 Putnam St., Peru, Ill.

Bottenfield, Susan Reed, from Decatur, Ga., to Lake Alfred, Fla., c/o John Monson.

Bradford, J. C., from Philadelphia, Pa., to 903 Jefferson St., Wilmington, Del.

Bush, L. M., from 516 Fifth Ave., to the New French Bldg., 551 Fifth Ave., New York, N. Y.

Carter, H. V., from New York City, to 545 S. Coronado St., Los Angeles, Calif.

Clarkson, Grace E., from 352 Angell St., to 516 New Industrial Trust Bldg., Providence, R. I.

Clybourne, Harold E., from 731 E. Broad St., to 749 E. Broad St., Columbus, O.

Covey, Florence A., from 1016 Chapman Bldg., to 14 Brown Bldg., 537 Congress St., Portland, Me.

Croup, L. E., from McKeesport, Pa., to 611 Diamond Bank Bldg., Pittsburgh, Pa.

Day, O. K., from Okemah, Okla., to Dalton, Mo.

Du Bois, O. J., from Abbott Hospital, to 5 and 6 Walthall Bldg., North 1st St., Oskaloosa, Iowa.

Duce, H. B., from North Andover, Mass., to Sagadahock Bldg., Rooms 9 and 10, Bath, Me.

Dulanty, John L., from Okemah, Okla., to Brunswick, Mo.

Ellison, W. H., from York Harbor, Me., to 618 Fig St., Tampa, Fla.

Epps, Franklin Stevenson, from 34 Court St., to National Shoe and Leather Bank Bldg., 11 Turner St., Auburn, Me.

Fenton, Helen, from 531 E. St., to 799 E. St., San Bernardino, Calif.

Fisher, Harry H., from Chicago, Ill., to 20 Church St., White Plains, N. Y.

Today

Physicians Examine Feet for the Origin of Certain Ills

Agencies

Akron—Keith Theatre Bldg., 50 S. High
Albany—65 Columbia St. (No. Pearl)
Allentown—955 Hamilton St.
Asbury Park—K Bowne
Atlanta—126 Peachtree Arcade
Atlantic City—924 Pacific Ave
Baltimore—316 N. Charles St.
Birmingham—311 N 20th St.
Bridgeport—1026 Main St. (2nd floor
Brooklyn—14 Hanover Pl. (at Fulton St.)
Boston—Newbury & Clarendon Sts.; also Cora Chandler Shop, 50 Temple Place
Buffalo—120 W Chippewa St.
Charlotte—Elrd'a, 24-30 N. Tryon St
Chattanooga—315 Chattanooga Bank Bldg.
Chicago—162 N. State St.; 1049 Lawrence Ave.; 6410 Cottage Grove Ave.; Oak Park—1109 Lake St.
Cincinnati—Chamber Commerce Bldg.
Cleveland—1250 Huron Rd. at Euclid Ave.
Columbus, O.—104 E Broad (at 3rd)
Dallas—Medical Arts Bldg., 1717 Pacific
Denver—1610 Champa St.
Des Moines—W. L. White Shoe Co.
Detroit—2028 Park Ave., at Elizabeth
Duluth—34 West 1st St.
Elizabeth—258 N. Broad St.
Evanston—1627 Sherman Ave. (opp. P. O.)
Grand Rapids—Yager's Bootery
Hamilton, Ont.—8 John St. N.
Harrisburg—217 N. 2nd St.
Hartford—Church & Trumbull Sts.
Houston—205 Gulf Bldg. (Take Elevator)
Indianapolis—L. S. Ayres & Co.
Jacksonville, Fla.—24 Hogan St.
Jamaica—92-17 Union Hall St.
Jamestown, N. Y.—317 N. Main St.
Kansas City, Mo.—300 Altman Bldg.
Knoxville—Spence Shoe Co., 415 Gay St.
Lawrence, Mass.—Geo. Lord & Son
Lincoln—Mayer Bros. Co.
Little Rock—117 W. 6th (nr. Main)
Los Angeles—728 S. Hill St., 3rd fr.
Louisville—Boston Shoe Co., 417 4th Ave
Memphis—123 S. Court Ave.
Miami—8 McAllister Arcade, nr. Flagler
Milwaukee—436 Milwaukee St.
Minneapolis—25 Eighth St. South
Montreal, Can.—1414 Stanley St.
Nashville—J. A. Meadors & Sons
Newark—895-897 Broad St. (2nd floor)
New Haven—190 Orange St., nr. Court
New Orleans—109 Baronne St. (Canal)
New Rochelle—Proctor's Theatre Bldg.
New York—14 W. 40th St. (Library) 762 Lexington Ave.
Oakland—516-5th St. (opp. City Hall)
Ogden—205 First Nat'l Bank Bldg.
Omaha—1706 Howard St.
Ottawa, Can.—241 Slater St. (at Banks)
Pasadena—424 E. Colorado St
Passaic—4 Lexington Ave.
Paterson—18 Hamilton St.
Peoria—1055 S. Jefferson Ave.
Philadelphia—1339 Walnut St. and 6106 Germantown Ave.
Pittsburgh—2nd floor, Jenkins Arcade
Portland, Ore.—372 Morrison St.
Poughkeepsie—Louis Schonberger
Providence—The Boston Store
Reading—Common Sense, 29 S. 5th St.
Rochester—17 Gibbs St. (nr. East)
Sacramento—1012 K St
Saginaw—Goeschel-Kuiper Co.
St. Joseph—216 N. 7th St.
St. Louis—516 Arcade Bldg. (opp. P. O.)
St. Paul—43 E. 5th (at Cedar)
Salt Lake City—Walker Bros. D. G. Co.
San Diego—The Marston Co.
San Francisco—212 Stockton St.
San Jose—2nd floor, Security Bldg.
Savannah—38 Whitaker St.
Seattle—Baxter's Inc., 1406 2nd Ave.
Sioux City—The Pelletier Co.
Spokane—The Crescent
Syracuse—121 W. Jefferson St.
Tacoma—750 St. Helen's Ave.
Tampa—215 Cass St.
Toledo—La Salle & Koch Co.
Toronto—9 Queen St. E. (at Yonge)
Trenton—36 W. State St.
Troy—4 Times Bldg., Broadway
Tulsa—Lion Shoe Store, 319 S. Main
Utica—18 Bank Pl., nr. Genesee St.
Washington—1319 F Street (2nd floor)
Wilmington, Del.—The Kennard-Pyle Co
Worcester—J. C. MacInnes Co.
Youngstown—B. McManus Co.

Write for Names of Agencies in Other Cities

PERHAPS one reason why the modern physician takes an interest in shoes is because they are both preventive and corrective. A foot disorder can cause a multiplicity of body ailments. Many physicians, appreciating this, examine the feet of every patient who complains of rheumatism, sciatica, arthritis, nervous indigestion, etc.

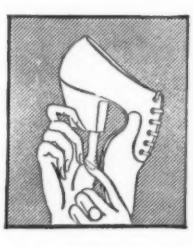
Doubtlessly, poorly designed as well as poorly made shoes are primary causes of most foot trouble. And it is true that, given the chance to do so, the foot tends to right itself. When the patient starts to wear a shoe that actually **encourages** the foot to become well, then there is every prospect of it being restored to normal.

Because of this corrective influence, physicians who have interested themselves in foot correction frequently recommend Cantilever Shoes to their patients as an aid to the restoration of foot normalcy.

CANTILEVER SHOES

Women—Men—Children

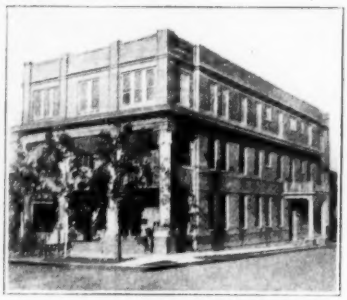
The scientific flexible arch . . . the straighter inner border . . . the snug and balanced heel fit . . . the extra toe room . . . the bandage-like arch fit . . . are Cantilever features which permit normal motion and exercise of the foot muscles, proper elongation for the toes (especially the great toe), correct balance, firm tread and a resilience that cushions the jars of walking.



Those physicians who are wearing the Cantilever Shoe are the most enthusiastic advocates of its healthful features.

Cantilever Corporation

410 Willoughby Ave.
Brooklyn, N. Y.



The Norwood Hotel

(European)

The Norwood building has been recently redecorated and improvements added. Heat is supplied from a hot water system that furnishes an even temperature both day and night. Rooms are sanitary and comfortable. Rates $1.00, $1.50 and $2.00 per day; also rates by week or month. The Norwood is centrally located as to cafes, bath houses and Mineral Wells, where "America drinks its way to health."

THE NORWOOD CLINIC

The Norwood Osteopathic office occupies most of the first floor of the building and is equipped with mercury quartz lights, carbon arc lights, infra red, diathermy, sinusoidal current, static electricity, chemical laboratory, and x-ray apparatus for making examination and treating diseases. The Norwood Clinic has many advantages in the treatment of all chronic diseases.

1. The extremely mild winter climate with the daily administration of mineral water.
2. The clinic has specialized in the treatment of chronic diseases and has many original devices that may be used to overcome ptosis and adhesions following rheumatism.
3. An improved office technic for the treatment of all rectal diseases without general anesthesis and hospital confinement, also an annual clinic that is attended by physicians from all parts of the United States.
4. A sun therapy lens, manufactured and sold by the clinic, is the most efficient escharotic in the treatment of skin lesions, including skin cancer.
5. The Norwood hotel offers the advantage of the milk diet, as the clinic owns a large herd of tuberculosis tested Holstein and Jersey cows, also Saanen milk goats.

DOCTOR !

Send us your friends, and, when they mention your name we will gladly give them our advice as to the use of the various mineral waters, baths, etc., without charge.

DRS. NORWOOD AND BROWN

Mineral Wells, Texas

Dr. James D. Edwards

OSTEOPATHIC FINGER SURGERY

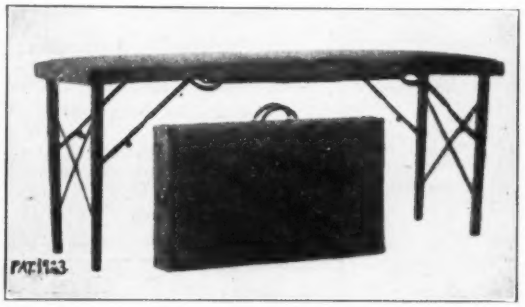
Deafness (acquired or congenital), Hay Fever, Asthma, Sinusitis, Bronchitis, Laryngitis, Glaucoma, Optic Atrophy, Eye-Squints, Cataract, Trachoma, Iritis, Choroiditis, Retinitis, Exophthalmos and Voice Alteration are materially benefited, if not entirely cured, by Finger Surgery and Osteopathic Surgery of the eye, ear, nose and throat.

PRACTICE LIMITED TO

Osteopathic Ophthalmology, Rhinology and Otolaryngology

Referred patients returned to home osteopath for aftercare.

Dr. J. D. Edwards
Chemical Building ST. LOUIS, MISSOURI



The Janisch Suit Case Folding Table

Strongest in Existence

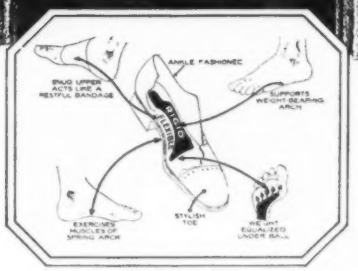
To Satisfy the Most Particular Doctors and Their Patients

Built for Strength, Appearance, Convenience and Unlimited Service. Note the Strong Suspension Arms. For Light and Heavy Weights and where Space is Limited.

Write for descriptive folder and prices.

A O A
844 Rush St., Chicago

Nunn-Bush
Arch-Fashioned Shoes



They exercise while they support

Built to the Specifications of an OSTEOPATH

All the features of the flexible arch shoe along the inner arch of the foot where flexibility is needed to properly exercise the muscles—all the features of the rigid arch where support is needed along the outer or weight bearing arch of the foot—Nunn-Bush Arch-Fashioned Shoes combine the advantages of both types of arch. They are **correct** shoes, equipped with the shank designed by J. M. Hiss, B.Sc., D.O., M.D., after years of study, to protect normal feet and to relieve aching feet.

Ankle-Fashioned as well as Arch-Fashioned, the uppers fit snugly, affording the adequate support of a restful bandage.

These "correct" shoes offer new possibilities for the successful treatment of foot cases. Free booklet, "Treatment and Care of the Feet," by Dr. Hiss gives complete facts. Return the coupon for your copy today.

FREE—MAIL THE COUPON

NUNN-BUSH & WELDON SHOE CO.
Milwaukee, Wisconsin Dept. A

Gentlemen: Please send me Free Booklet, "Treatment and Care of the Feet." Also name of store where I may inspect these "Correct" shoes for men.

Name .....

Address .....

ARKANSAS

Dr. Eugene M. Sparling
General Practice
Hydrotherapy
Referred Cases Given Special Attention
400-1-2 Arkansas National Bank Bldg.
Hot Springs, Arkansas
Gov't Registered D.O.

CALIFORNIA

FRANK CHATFIELD FARMER
D. O.
OSTEOPATHY
Gastro-Intestinal Clinic; Diagnosis and Referred cases a specialty
X-ray Laboratory, Clinical Laboratory, Hospital Facilities
1008 West Sixth St., Los Angeles, Calif.

DR. RALPH E. WALDO
DR. MARGARET J. WALDO
DR. JOHN B. WEEKS, Asst.
133 Geary Street
Phone Sutter 999 Whitney Bldg.
San Francisco, Calif.

DR. W. LUTHER HOLT
Courtesy to referred patients
1134 Subway Terminal Bldg.
417 S. Hill St.
(Downtown—Los Angeles)
Phone MUtual 2826

DR. GEO. F. BURTON
OSTEOPATHIST
Sacro-Iliac Specialist
220 Story Building, Los Angeles
Phone: Vandike 5692

Charles D. Finley, D.O.
owner of
FINLEY'S HEALTH HAVEN
Prepared to handle high class institutional cases and conduct a general office practice. Fasting and diet a specialty.
41 N. Madison Ave., Pasadena

CALIFORNIA

T. J. RUDDY, M.D., D.O., Offices 301-315 Black Bldg., Los Angeles

GENERAL DEPT.	(Diagnostic Only)
OPHTHALMOLOGY DEPT.	"Eye Finger" and "Vacuum" (Oculovac) Eye Treatment (Cataracts, etc.)
OPTOMETRY DEPT.	Refraction and "Optostat" Correction
OPTICAL DEPT.	Fitting and Supplying
OTOLOGY DEPT.	(Including Equilibrium)
RHINOLOGY DEPT.	("Finger Technique," "Auto-aspiration," etc.)
LARYNGOLOGY DEPT.	(Including Suspension Bronchoscopy)
DENTAL PATHOLOGY DEPT.	(Diagnostic Only)
DENTAL SURGERY DEPT.	(Conservative)
RADIOLOGY DEPT.	(Snook—Coolidge and Radium)
LABORATORIES DEPT.	(Tissue—Blood Chemistry—General Chemistry)
METABOLISM (BASAL) DEPT.	(Boothby-Tissot and Krogh-Haldane-Sanborn)

Note announcement of new methods for Eye diseases and certain Errors of Refraction. Every Technician an Expert.
ALL CASES REFERRED BACK, WITH REPORT, TO OSTEOPATH REFERRING CASE

Fogarty, Joseph A., from Chicago, Ill., to 405 Wirthman Bldg., Kansas City, Mo.

Gearhart, Kenneth C., from Keystone Bldg., to 217 North Second St., Clearfield, Pa.

Hinton, H. L., from 311 Security Bldg., to Rooms 201-2 Cedar Rapids Savings Bank Bldg., Cedar Rapids, Iowa.

Hoover, H. V., from Seattle, Wash., to 801 Fidelity Bldg., Tacoma, Wash.

Hudson, B. T., from 12th Ave. and 17th St., to Room 206 Central Trust Bldg., Altoona, Pa.

Kaelber, F. M., from 516 Fifth Ave., to the New French Bldg., 551 Fifth Ave., New York, N. Y.

Kohn, Herman, from 2556 33rd St., to 2519 S. Island Rd., Philadelphia, Pa.

Laird, W. A., from Cedar Vale, Kans., to 310½ E. Grand Ave., Ponca City, Okla.

Lynch, Delia A., from Omaha, Nebr., to 155 N. Workman St., Los Angeles, Calif.

Marini, Joseph A., from Montague, Mass., to Gryphon Bldg., Rutland, Vt.

Martin, R. L., from Green City, Mo., to Purdin, Mo.

Parker, C. K., from Chicago, Ill., to 211 Citizens Bank Bldg., South Bend, Ind.

Roberts, Alice W., from 510 Hannibal Trust Co., to 503a Broadway, Hannibal, Mo.

Robinson, Harley J., from 1116 N. Delaware, to 1000 Kahn Bldg., Indianapolis, Ind.

Dr. Charles Albert Blind
Eye, Ear, Nose and Throat
LOS ANGELES CLINICAL GROUP
610 Edwards & Wildey Building
609 S. Grand Ave., Los Angeles

J. RUSSELL MORRIS
Oph.D., D.O.
Practice Limited to
Eye, Ear, Nose and Throat
FRANKLIN BUILDING
1624 Franklin Street Oakland

Dr. Phillip V. Aaronson
Osteopathic Physician, Surgeon and Foot Specialist
240 STOCKTON STREET
SAN FRANCISCO

Dr. Nellie M. Cramer
Osteopathic Physician
Work Building Monterey

Ideal Rest Home
468 VERNON ST.
OAKLAND
WONDERFUL WINTER CLIMATE
Just the place to send a patient for convalescence and recuperation.
Best of care, osteopathy, colonic irrigations, scientific dieting. Homelike atmosphere. Cheerful, happy attendants.
EDGAR S. COMSTOCK, D.O.
Write for information Director

CALIFORNIA

DR. T. J. WATSON
OSTEOPATH
announces the opening of his office for a limited practice at
1215 Taft Bldg., Hollywood Blvd., at Vine St., Hollywood
Phone Hollywood 6001
Former address for 22 years:
Hotel Woodward, 55th and Broadway, New York City

CANADA

THE MONTREAL OSTEOPATHIC GROUP
616 Medical Arts Building
DR. HARRYETTE S. EVANS
DR. E. O. MILLAY
DR. W. P. CURRIE

DISTRICT OF COLUMBIA

DR. CHESTER D. SWOPE
Osteopathic Physician
The Farragut Apts.
Washington, D. C.

FLORIDA

R. C. WUNDERLICH, D.O.
GENERAL PRACTICE
405-406-407 Hall Bldg.
St. Petersburg, Fla.

Dr. Harrison McMains
Osteopathic Physician
HOURS 9 TO 4
THURSDAY AND SAT. 9 TO 1
110 E. Central Ave. Orlando

FLORIDA

DR. C. E. DOVE
General Practice
Guaranty Building
West Palm Beach, Fla.

THE DENVER CLINICAL GROUP
"An Organization for Service"
DR. RALPH M. JONES, General Diagnosis
DR. CHARLES L. DRAPER, Obstetrics and Pediatrics
DR. HARRY M. IRELAND, Eye, Ear, Nose and Throat
DR. J. EUGENE RAMSEY, Orificial Surgery and Gynecology
DR. HOWARD E. LAMB, Surgery
DR. PHILIP A. WITT, Anesthetics and X-Ray
DR. ROBERT C. BOYD, Dental Surgeon
COMPLETE LABORATORY FACILITIES
Members of Staff, Rocky Mountain Hospital
Suite 320 Empire Bldg. Denver, Colorado

THE ROCKY MOUNTAIN CLINICAL GROUP
DR. R. R. DANIELS, Diagnosis
DR. EMMA ADAMSON, Osteopathy and Colonic Therapy
DR. C. C. REID, Eye, Ear, Nose, Throat
DR. F. I. FURRY, Orificial Surgery and Physiotherapy
DR. L. F. REYNOLDS, Osteopathic Physician
DR. A. C. DEWSBURY, Dental Surgery
DR. L. GLENN CODY, Dental Surgery
MEMBERS OF STAFF, ROCKY MOUNTAIN HOSPITAL
1550 Lincoln Street DENVER, COLO. Clinical Bldg.

Scoville, R. S., from Mitchell, S. Dak., to Flandreau, S. Dak.

Showalter, E. H., from 215 W. Walnut St., to 502 Armstrong-Landon Bldg., Kokomo, Ind.

Simpson, John H., from 1640 Ionia St., to 318 St. James Bldg., Jacksonville, Fla.

Steidley, Neva Miller, from Bolckow, Mo., to 412 N. Elson, Kirksville, Mo.

Tindall, W. L., from Fonda, La., to Howell Bldg., Eagle Grove, Ia.

Triplett, L. B., from Springfield, Mass., to 870 South Los Robles Ave., Pasadena, Calif.

Turner, T. R., from Reynolds Bldg., to Bristol Gas and Electric Bldg., Bristol, Tenn.

Weaver, Charlotte, from Maisons Laffitte, France, to Apt. 30, The Twin Oaks, 202 Twin Oaks Road, Akron, Ohio.

White, R. W., from Lewiston, Pa., to 61 E. Main St., Bloomsburg, Pa.

NEW JERSEY

Dr. Jerome Moore Watters
23 James Street
Newark, New Jersey
Practice limited to diseases of the eyes, ears, nose and throat

ILLINOIS

Dr. Joseph H. Sullivan
Dr. Oliver C. Foreman
OSTEOPATHIC PHYSICIANS
807, 27 East Monroe St.
Pioneer Osteopathic Office
Chicago
Est. 1894 DEArborn 4538

MASSACHUSETTS

Dr. Orel F. Martin
SURGEON
Massachusetts Osteopathic Hospital
43 Evergreen Street
Jamaica Plain Station
BOSTON, MASS.

NEW YORK

DONALD B. THORBURN, D.O.
HOTEL WHITE
303 Lexington Avenue
At Thirty-seventh Street
New York City
General Practice and Gastro-Intestinal

DR. MORRIS M. BRILL
Osteopathic Physician
Charge—Ear, Nose and Throat of the
New York Osteopathic Clinic
18 East 41st St.
New York City

NEW YORK

A. B. CLARK, D.O.
MARGOT SCHLEIFF, D.O., Asst.
AMOS P. CLARKSON, D.O., Asst.

General Osteopathic Practice

77 Park Avenue, Corner 39th Street Tel. Caledonia 9667 NEW YORK CITY
LONG ISLAND OFFICE
121 Fulton Ave., Cor. Cathedral Ave. Tel. Hempstead 3205 HEMPSTEAD, L. I.

Thomas R. Thorburn, D.O., M.D.

SURGERY

Nose, Throat and Ear

Hotel Buckingham—101 West 57 St.
New York City

DR. L. M. BUSH
Ear, Nose and Throat

Sixteen Years' Experience
Specializing in normalization of the Eustachian tube and adenoid and nasal adjustment technique.

551 Fifth Ave., Cor. 45th St.
New York City

OHIO

East Broad Street Clinic

Dr. Charles M. LaRue
Eye, Ear, Nose and Throat

731 East Broad Street
Columbus, Ohio

APPLICANTS FOR MEMBERSHIP

Illinois

Miller, Chester L., 27 E. Monroe St., Chicago.

Ennis, Emery, 308 Ferguson Bldg., Springfield.

Indiana

Summers, F. J., 413 Union Trust Bldg., South Bend.

Iowa

Lundgren, Abel L., 704 Carver Bldg., Fort Dodge.

Minnesota

Foley, Walter K., 47 S. Ninth St., Minneapolis.

Ohio

Bumstead, L. A., Peoples Bldg., Delaware.

Oklahoma

Kelley, O. L., 101½ W. Oklahoma Ave, Guthrie.

Texas

Platt, Reginald Jr., 1018 Isabella St., Houston.

Canada

Bond, Martha L., 3 Stephenson Block, Saskatoon, Sask.

OHIO

ROSCOE
OSTEOPATHIC
CLINIC
1001 Huron Road
Smythe Building
CLEVELAND

PENNSYLVANIA

CHARLES J. MUTTART, D.O.
Gastro-Enterology and Proctology
X-ray and Clinical Laboratory
1813 Pine St.
Philadelphia, Pa.

WM. OTIS GALBREATH
PROFESSOR
Eye Ear Nose Throat
Philadelphia College of Osteopathy
Surgeon to the Osteopathic Hospital
414 LAND TITLE BLDG.
PHILADELPHIA

FOREIGN

PARIS
Fred E. Moore
Practice of Osteopathy
12 rue du Faubourg
St. Honore
Throughout the Year

Still-Hildreth Osteopathic Sanatorium
MACON, MISSOURI

A great osteopathic institution where nervous and mental patients are cured through genuine osteopathic treatment, hydrotherapy, diet, exercise, etc. After fourteen years of experience this institution emphasizes the fact that osteopathic treatment cures the greatest percentage of the insane of any treatment yet discovered.

Address all inquiries to the STILL-HILDRETH OSTEOPATHIC SANATORIUM, Macon, Missouri

This cut shows one of our three styles of sanitary white enamel iron tables.

PURE WHITE CLOVER HONEY FOR SALE

Full descriptive catalog and price list with samples of coverings sent on request.

Dr. George T. Hayman
Mfg. of tables for over 25 years.
DOYLESTOWN, PA.

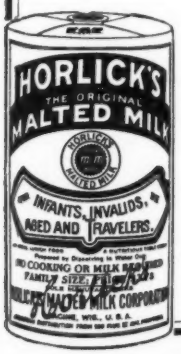
Solved!

Many of your diet problems—

Horlick's *the Original*
Malted Milk

A bland and nourishing food of unique value—

1. In pneumonia and other respiratory diseases.
2. In typhoid and low fevers.
3. In peptic ulcers.
4. In building strength before and after operations.
5. In nervous affections.



Samples on Request

HORLICK'S Racine, Wis.

THE JOURNAL
of the American Osteopathic Association

PUBLICATION OFFICE
1112 North Blvd., Oak Park, Ill.
EDITORIAL OFFICE
844 Rush St. Chicago, Ill.
Room 524 Phone Superior 9407
C. J. Gaddis, D.O., Managing Editor

Classified Advertisements

(Fifty cents a line. Average six words a line)

FOR RENTAL: Capable physician can associate with group in unusually attractive, new, spacious, centrally located downtown, Los Angeles offices. Address S. M., care Journal.

FOR SALE: $12,000 practice to interested prospect. Address V. H. O., care Journal.

FOR RENT: Offices; established location; Western Pennsylvania; city 12,000; fine location for good man. Mrs. Steele, Greenville, Pa.

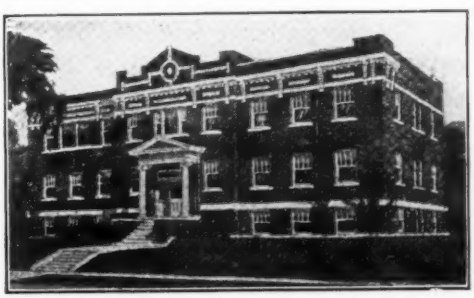
FOR SALE: Nelson's Loose-Leaf Medicine $50. Write Dr. G. E. Cox, 15 Fairmount Ave., Hyde Park, Mass.

FOR RENT: Completely furnished downtown office for Physician, Surgeon, Osteopath. Hours 9-1. Office attendant. Address Dr. E. N. Percival, 707 Detwiler Bldg., Los Angeles, Calif.

FOR SALE: Established practice in New Hampshire, reason health. Will sell for price of equipment. Address K. S., care JOURNAL.

I WISH to give up my practice for six to twelve months in southern California, and will give one-half interest in my practice and office equipment for $2,500. H. M. G., c/o JOURNAL.

AMBULANT PROCTOLOGY: Will take a limited number of osteopathic physicians (one at a time) as assistants, to learn ambulant proctology. For particulars address Dr. Percy H. Woodall, 617 First National Bank Bldg., Birmingham, Ala.



DEDICATED TO DR. ANDREW TAYLOR STILL

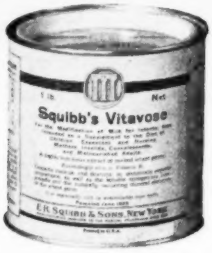
The Laughlin Hospital
Kirksville, Mo.

SURGERY AND OSTEOPATHY

A new forty-two room fire-proof hospital. Patients will be treated under the direction of Dr. George M. Laughlin, who is supported by a capable staff. A training school for nurses is maintained in connection with the hospital work. Any desired information may be obtained from

DR. GEORGE M. LAUGHLIN, Kirksville, Mo.

New!



A wonderful product which supplements the diet in *Vitamin* B

In the light of our present knowledge of nutrition, the necessity for an adequate amount of Vitamin B in the diet has been definitely established. Vitamin B is essential not only as a growth factor but *also for adequate nutrition throughout life.*

Vitamin B is widely distributed in varying amounts in natural foods. It is abundant in the germs of cereals and nuts, yeast, eggs, fresh vegetables and fruits.

Notwithstanding the existence of these rich sources of Vitamin B, the average American diet often fails to supply an adequate amount of this essential factor. Loss of appetite and weight, a low level of health, and, later, possibly more serious gastro-intestinal derangements may result from a deficiency of Vitamin B.

Vitavose, developed by E. R. Squibb & Sons, is offered as a diet-supplement for all cases where a deficiency of Vitamin B may be suspected.

Vitavose is a palatable and highly nutritious maltose-dextrin preparation made from malted wheat germs. It differs from other essentially carbohydrate foods in that *Vitavose is an excellent source of Vitamin B and assimilable iron salts.*

Because of its high Vitamin B content, the use of Vitavose stimulates the appetite and effects a better assimilation of food. Its slightly laxative qualities aid in overcoming a tendency to constipation.

The uses of Vitavose are many. It is particularly valuable as a supplement to the diet of children, expectant and nursing mothers, convalescents and malnourished adults. It is also used with great success as a milk-modifier for infant feeding.

Symptoms that indicate a deficiency of Vitamin B or an inadequate supply of iron, suggest the addition of this valuable new supplement to the diet. Your patients will like its malty flavor, especially when it is taken in milk.

Vitavose is physiologically tested for its vitamin content. Accepted by the Council on Pharmacy and Chemistry, American Medical Association

Write for detailed information and samples of Vitavose

SQUIBB'S VITAVOSE

The Infant and Vitamin B

RECENT studies have shown that human milk is even more deficient than cow's milk in Vitamin B, although abundant in fat soluble vitamins.

This indicates that nursing young need Vitamin B reinforcement.

Vegex supplies this reinforcement in ample quantity and in delicious form.

It can be served as a broth or hot drink. Added to milk, soups or other foods, it enhances the flavor, in addition to giving the needed Vitamin B (B_1 and B_2) reinforcement.

So many of our staple foods have been deprived of this essential vitamin that Vegex can be added, with advantage, to the diet of both infant and adult. It will be a worthwhile addition to your table.

We wish to send a jar to your home for a test.

VEGEX

Trademark Reg. U. S. Pat. Off.

VEGEX, INC., Dept. A. O. 2
34 Ericsson Pl., New York City, N. Y.

Gentlemen: Please send, without charge, sample of Vegex, with complete information and book of recipes.

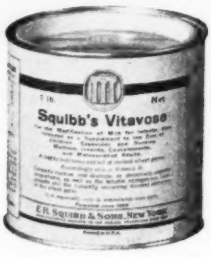
Dr......

Home Address.....

.....

B_1—Antineuritic factor. B_2—PP factor.

New!



A wonderful product which supplements the diet in *Vitamin* B

In the light of our present knowledge of nutrition, the necessity for an adequate amount of Vitamin B in the diet has been definitely established. Vitamin B is essential not only as a growth factor but *also for adequate nutrition throughout life.*

Vitamin B is widely distributed in varying amounts in natural foods. It is abundant in the germs of cereals and nuts, yeast, eggs, fresh vegetables and fruits.

Notwithstanding the existence of these rich sources of Vitamin B, the average American diet often fails to supply an adequate amount of this essential factor. Loss of appetite and weight, a low level of health, and, later, possibly more serious gastro-intestinal derangements may result from a deficiency of Vitamin B.

Vitavose, developed by E. R. Squibb & Sons, is offered as a diet-supplement for all cases where a deficiency of Vitamin B may be suspected.

Vitavose is a palatable and highly nutritious maltose-dextrin preparation made from malted wheat germs. It differs from other essentially carbohydrate foods in that *Vitavose is an excellent source of Vitamin B and assimilable iron salts.*

Because of its high Vitamin B content, the use of Vitavose stimulates the appetite and effects a better assimilation of food. Its slightly laxative qualities aid in overcoming a tendency to constipation.

The uses of Vitavose are many. It is particularly valuable as a supplement to the diet of children, expectant and nursing mothers, convalescents and malnourished adults. It is also used with great success as a milk-modifier for infant feeding.

Symptoms that indicate a deficiency of Vitamin B or an inadequate supply of iron, suggest the addition of this valuable new supplement to the diet. Your patients will like its malty flavor, especially when it is taken in milk.

Vitavose is physiologically tested for its vitamin content. Accepted by the Council on Pharmacy and Chemistry, American Medical Association

Write for detailed information and samples of Vitavose

SQUIBB'S VITAVOSE

The Infant and Vitamin B

RECENT studies have shown that human milk is even more deficient than cow's milk in Vitamin B, although abundant in fat soluble vitamins.

This indicates that nursing young need Vitamin B reinforcement.

Vegex supplies this reinforcement in ample quantity and in delicious form.

It can be served as a broth or hot drink. Added to milk, soups or other foods, it enhances the flavor, in addition to giving the needed Vitamin B (B_1 and B_2) reinforcement.

So many of our staple foods have been deprived of this essential vitamin that Vegex can be added, with advantage, to the diet of both infant and adult. It will be a worthwhile addition to your table.

We wish to send a jar to your home for a test.

VEGEX

Trademark Reg. U. S. Pat. Off.

VEGEX, INC., Dept. A. O. 2
34 Ericsson Pl., New York City, N. Y.

Gentlemen: Please send, without charge, sample of Vegex, with complete information and book of recipes.

Dr......

Home Address.....

.....

B_1—Antineuritic factor. B_2—PP factor.

For Post-operative Cases

Avoid Risks

After major operations, patients are particularly subject to constipation because they are unable to take regular exercise.

Constipation in such cases has special risks, in addition to its usual dangers. After abdominal operations especially, any extra strain or exertion on the part of the patient may result in a post-operative hernia.

Nujol is invaluable in these cases. It acts effectively in making elimination easy, normal and regular. It avoids all risk of strain on abdominal muscles, and does not upset or disturb the system of a convalescent as more drastic agents do.

For these reasons many surgeons and hospitals prescribe Nujol for patients when they are discharged after operations.

Nujol

REG. U.S. PAT. OFF.